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Educational News and Editorial Comment

THE UNIVERSITY OF CHICAGO DINNER

The annual University of Chicago Dinner in connection with the meeting of the Department of Superintendence of the National Education Association will be held at the Hotel Statler in Detroit, Michigan, at six o'clock on the evening of Wednesday, February 25, 1931.

Tickets, at the rate of $2.50 each, may be secured from Dean W. S. Gray, School of Education, University of Chicago.

GRADUATE WORK IN THE TEACHERS' COLLEGES

One of the striking educational changes in this country in recent years has been the rapid development of the normal school into the teachers' college. More recently a number of these institutions have undertaken to give graduate work, and others seem to be on the point of undertaking such a program.

Teachers' colleges should move in the direction of graduate work with a great deal of caution. There is grave danger of premature entrance into the graduate field, and this danger the teachers' colleges should avoid. The fact has been repeatedly demonstrated that

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the scientific training of the faculties of most of these institutions is inadequate to support high-grade graduate work. To employ a staff qualified by training and experience to give instruction on the graduate level would entail an expenditure which few of these institutions are at present justified in making. After all, the first obligation of the teachers' colleges to students and to the public is that they give high-grade undergraduate instruction. Premature entrance into the graduate field will result in the dissipation of resources and energy and in inferior work at all levels.

Before the teachers' colleges attempt to enter the field of graduate work, the members of the staffs should undergo a period of intensive training to prepare them to do independent work in the field of education. This training might very well be obtained by making intensive studies of the school systems of the territory served by the colleges. When the members of the faculties of the teachers' colleges have made such studies successfully and have learned how to formulate their results independently, the colleges will then be in a much better position to enter the graduate field.

THE MAYOR AND THE SCHOOLS OF CHICAGO

The mayor of Chicago has devised a scheme whereby he proposes to stimulate business and to relieve unemployment. At first the mayor's plan had all the appearances of a lottery. It was so adjudged by the federal authorities, and the use of the mails in furthering the scheme was denied, although the decision was later reversed.

When the mayor first proposed his scheme, he undertook to draw the children of the public schools into it by having them distribute certain literature to their parents. Superintendent Bogan, however, very properly refused to become a party to the mayor's plan or to permit the school children to participate in it. By refusing the mayor's request, Mr. Bogan, it seems, has incurred the mayor's displeasure. The mayor found other means of distributing the handbills to the school children, which contained the following statement:

> This is the only request I have ever made of him [Superintendent Bogan] since I agreed to his appointment to his high office, and I will never make another request of him for his answer refusing me indicates he is heartless and has a head filled with impractical ideas—as he insists on saving your spiritual bodies even if your physical bodies starve to death while he is doing so.

After the spectacle of the McAndrew trial, it was hoped that the mayor would leave the administration of the public schools in the hands of those to whom the law and public policy intrust it. In general, he seems to have done so. Clearly, however, he still regards the schools as the proper agencies for the promotion of his own schemes. Chicago is fortunate to have a superintendent of schools who has the courage to stand between the schools and improper influences, even though those influences may emanate from the office of the mayor himself.

There is one statement in the mayor's handbill which calls for special comment. The mayor states that he agreed to Superintendent Bogan's appointment to his high office. Such a statement reveals an utter lack of understanding of the law and of certain elementary principles of public policy. After the mayor appoints the members of the board of education, legally he has no more authority over their conduct of the public schools than does any other citizen of Chicago. This fact he should know and be guided by. The courts have repeatedly and uniformly held that the public schools are state and not municipal institutions. The members of the Board of Education of Chicago are state officers representing the state in the administration of an important state function. They are in no sense municipal officers.

The administration of the public schools in Chicago and in many other cities calls sharp attention to the fact that there is need for a clear understanding of the relation of the school board to the municipal authorities. Over and over again boards of education, which in the contemplation of the law are supposed to be independent of municipal authorities, permit those authorities to control matters over which they have no legal control. If such a condition persists, the only remedy will be for the state to refuse to employ municipal authorities for the performance of any school functions.

THE WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION

The planning committee of the White House Conference on Child Health and Protection, which convened in Washington on November 19, 1930, had organized the work of the conference into four main

sections. Section I dealt with Medical Service, Section II with Public Health Service and Administration, Section III with Education and Training, and Section IV with the Handicapped. Within each section numerous committees and subcommittees attacked specific problems. For some fifteen months more than twelve hundred members of the conference had been assembling information with regard to practically every aspect of child welfare and development. The various sections and committees submitted their reports, which, when summarized, filled a volume of more than six hundred pages. Before adjourning, the conference agreed upon nineteen standards for the physical, mental, moral, social, and economic protection of the American child. A continuing committee is to be appointed to give further consideration to the principles and policies upon which the conference could reach no agreement. Each of the four sections will continue to evaluate the materials which have been assembled and will later publish such facts as it has been able to establish, together with its findings and recommendations.

The significance of the conference does not lie in any specific action taken at Washington. What the conference did was to direct attention in a dramatic way to the problems which surround the development of the youth of the nation. More significant still is the fact that there has been amassed a body of scientific information which should prove to be of exceedingly great value. The publication of the full committee reports will be awaited with interest.

SPECIAL PROVISION FOR THE GIFTED CHILD

The following statement was published in the *United States Daily*.

The education of gifted children constitutes a special problem in the United States which should be met by extending educational facilities to meet their peculiar needs, the committee on special classes pointed out in a report to the White House Conference on Child Health and Protection.

There are now in the country 1,500,000 children in the gifted class, of whom only 4,000 are receiving special education, according to information made available at the central office of the White House Conference, Interior Building.

Further information made available on this group follows.

A gifted child, according to the committee findings, is one who possesses exceptionally good intelligence and deviates from the average to such an extent that he requires special education in order to make the most of his possibilities. The gifted are those who rate an intelligence quotient of 120 and above.

Special classes for gifted children have been established in forty large cities. These classes are of two types: first, that calculated to make for rapid progress; second, that designed for enrichment.

Those classes which stress enrichment provide for greater informality and utmost freedom in guiding the pupils. Chairs replace desks, and the general curriculum is modified to allow for considerable reading and a wide choice in fulfilling the special talents the children display.

Cities differ as to the age of the pupil and his school grade in starting the segregation from the average pupils. The practice of segregation ranges from the second half of the first grade to the junior high school. The trend, it is pointed out, is in the direction of early segregation.

The importance of calling public attention to the special education of the gifted is stressed in the report. The public should be awakened to the fact that inattention to the gifted results in a loss to the community of wasted talents on the one hand and abuse of capacity on the other. Many gifted individuals are found in penitentiaries, while others are not contributing to society because they lack training to use their potential intelligence to best advantage.

To create a greater public interest in this problem of education, it is suggested that the commissioner of education and the National Education Association be asked to promote its consideration through those in charge of education.

EDUCATION OF THE PHYSICALLY HANDICAPPED

The following statement was published in the *United States Daily*.

Approximately 6,000,000 children in the United States are suffering from malnutrition in addition to more than 3,000,000 children in the elementary schools who suffer from physical handicaps requiring special treatment and training, the chairman of the committee on special classes, Charles S. Berry, declared in a report to the White House Conference on Child Health and Protection.

The committee finds, according to information made available at the office of the conference, Department of the Interior, that there is a surprisingly large number of handicapped children of every type who need special education and a comparatively small number who are receiving it.

While much is being done in special cases to remove or reduce the handicap, little is being done to discover and develop special aptitudes, it was stated.

Special educational provisions for the handicapped are recommended by the committee as a means of coping with the problem.

Further information made available follows.

Among the children enrolled in the schools of the nation, 382,000 have tuberculosis, and 850,000 others are suspicious cases. Approximately 1,000,000 school children have weak or damaged hearts, and, of this number, 375,000 have serious organic heart disease. Children of this group, including those suffering from epilepsy, constitute the group described as being of lowered vitality.

Special classes have been set up in large cities to deal with this group. Experience shows the possibility of educating the child of lowered vitality. The educational program is correlated with the health program. In cities of 10,000 population and above there are 40,000 children enrolled in open-air schools and classes.

Little provision has been made for the special treatment of children of lowered vitality in their training and instruction.

To combat the situation, early detection and early treatment are necessary. A special class should be organized in every school system where there are ten or more children of lowered vitality. Technically trained teachers are needed. Vocational guidance and prevocational training are needed. More attention should be given the subject by the public generally. It needs to think of the handicapped individuals in terms of their ability rather than in terms of their disability.

The crippled children have introduced problems for solution. There are more than 300,000 crippled children in the United States. Of these at least 100,000 need special education. Careful surveys of them are necessary in each locality because they are unevenly distributed.

In the treatment of cripples sixteen states authorize or require local school districts to establish special classes, eleven provide state aid, and nine provide supervision in the state department. Progressive legislation of this kind and that referring to bedside teaching in hospitals and convalescent homes for cripples should be indorsed and extended.

Children suffering from defective speech constitute another group handicapped in their educational training. Among the total school enrolment, more than 1,000,000 children between the ages of five and eighteen are so defective in speech that they require remedial treatment and training.

At present less than 60,000 children so handicapped receive necessary corrective treatment and training. Little attention is given the problem outside of large cities. The committee finds that there is a real need for extending the work of speech correction to every unit of the school system of the country.

In its study of the handicapped who present special cases for training, the committee sets forth outstanding needs in respect to the treatment of the blind, deaf, and hard of hearing. More Braille classes are recommended to meet the problem of blindness and a trained staff to detect early abilities of the blind in order to guide them in the proper vocational training.

Standardized intelligence and educational tests for use with children who are deaf and hard of hearing are needed. About sixty cities today teach lip-reading outside of special schools and classes for the deaf. Lip-reading instruction should be extended to all hard-of-hearing pupils.

The committee calls for a wider study of the handicapped generally and the enactment of legislation to extend the facilities of special training to them more generally.

MAKING AVAILABLE THE MATERIALS AND METHODS OF THE LABORATORY SCHOOLS

The University of Chicago has begun a new series of publications under the title "Publications of the Laboratory Schools of the University of Chicago." The purpose of the new series is to make available materials which will indicate the character of the work done in the Laboratory Schools with respect to methods and materials of instruction.

The first number of the series deals with the elementary-school library and is published under the title *A Library for the Intermediate Grades*. In this monograph Evangeline Colburn, teacher-librarian in the Elementary School of the University of Chicago, gives an account of the methods she has employed to stimulate and to guide the voluntary reading of pupils in the intermediate grades. The monograph also includes an annotated list of books representing the most frequent choice of pupils in the voluntary-reading period. The books in this list are classified in five main sections as follows: "History, Geography, and Travel"; "Science, Arts, and Invention"; "Fairy and Fanciful Tales"; "Poetry"; and "Stories of All Kinds." Each book listed is described in some detail with respect to content and with respect to its appeal to pupils of the various grades. It is further indicated whether a book on this list appears also in certain earlier lists of children's books. The earlier lists used were *Graded List of Books for Children*, prepared by the Elementary School Library Committee of the National Education Association; *Children's Reading*, by Terman and Lima; and the *Winnetka Graded Book List*, by Washburne and Vogel.

An analysis of the library records reveals some interesting facts with respect to the reading interests of pupils. The most significant of these facts are as follows:

1. There is a wider variation between the choices of sexes than of grades. Many girls read boys' books; few boys read girls' books.
2. Titles containing the words "mystery," "secret," etc., are sought by both boys and girls excepting in such titles as *Polly's Secret*, which boys will reject.
3. Titles suggestive of girls are usually shunned by boys.
4. Interest in animal life is common to both boys and girls.
5. Boys read more from the field of science than do girls. This applies particularly to invention, construction, etc.

6. There is comparatively little reading of poetry and plays. The fourth-grade girls choose poetry more frequently than do other children. Fifth-grade boys and girls make use of books of poems in connection with their classroom work, but there is not a lasting interest in them.

7. Factual material is read extensively by both boys and girls of all three grades, and there is evidence that they would read more if it were available in well-written and attractive form suitable for juvenile readers.

8. There is evidence that interests are aroused in history, geography, and science classes which influence children's reading. In general, girls are more responsive to these interests than are boys.

Some children are slow to respond to induced interests. An example of such a case is that of a fifth-grade girl who sought every available book about stars and read with great interest on that subject which had been presented in science the previous year. She commented on the fact that she had learned about stars the year before but had not then felt interested in reading about them.

9. Children of all three grades show considerable interest in reading biography. More biography would be read if more were suitably written. During the months of March and April in 1924, 262 biographies were read by the sixth-grade classes. This made an average of about three for each child.

10. The chief elements of interest in fiction-reading are animal life, activities of children, and adventure. During a period of three months, 31 per cent of all the books read by one Grade IV were books from the "Twin Series" by Lucy Fitch Perkins—books which deal with the activities and adventures of children of various countries. Twenty per cent of the books read during the same period were animal stories, many of which were those by Thornton W. Burgess.

During the same period, 27.9 per cent of the fifth-grade readings were animal stories.

11. Realistic stories are in greater demand even in the fourth grade than are fairy tales. Some children, however, who have not had wide reading experience indulge to some extent in reading these tales. These statements apply also to children in the upper grades.

12. Some children enjoy re-reading their books. The tendency to do this is more marked in the fourth grade than in higher grades.

13. The average child in these grades shows considerable breadth of interests. A few have highly specialized interests, as one sixth-grade boy who has always confined his reading as closely as possible to various aspects of natural science.

14. Sustained interest in some subjects is prominent with some children. An example of this is a fourth-grade girl who is interested in Holland and the Dutch. She wants to read everything available on these subjects. Her case parallels that of a sixth-grade girl who was absorbed in the study of India and exhausted the sources of the library on that subject.

15. There is a strong preference manifested for long selections, for entire books rather than collections of stories.

16. Many of the older books are among the most popular with the children, such as the Alcott books, *Toby Tyler*, *Black Beauty*, *Beautiful Joe*, and others which were probably read by their parents. On the other hand, there is much demand for the new; for stories of the World War, aviation, camping tales, etc.

17. There is not as much use made of the periodicals supplied as might be expected of boys and girls of these ages. This is due, no doubt, to the fact that many of the children have access to them in their own homes. *Popular Mechanics*, *Child Life*, the *American Boy*, and *St. Nicholas* are used more than others.

Through responses to a questionnaire pertaining to their home reading, it was found last spring that with few exceptions all of these children read regularly at least one periodical. The titles appearing most frequently were *Child Life*, *St. Nicholas*, *Nature Magazine*, *American Boy*, *Popular Mechanics*.

Among the titles read occasionally were several adult magazines which are found in the average American home, such as *The American*, *Ladies' Home Journal*, and others of similar nature.

The questionnaire further revealed that all of the children read parts of a daily, or Sunday, paper. Some have regular access to two or more. The parts most frequently read were the comic sections, or "funnies," and the front page.

18. Difficulty of style or of vocabulary seldom prevents a child from reading about the things in which he is keenly interested. Scotch and negro dialect are the two outstanding exceptions.

19. There is gradual improvement in both quality and quantity of reading done by these children. This improvement cannot well be attributed entirely to opportunity for wide reading, for the influence of the teachers, indirect though it may be, is effective.

20. There is evidence that the social development of some children influences the quality of their reading. They acquire new interests and wish to share the experiences of their friends, and so choose books which they hear talked about. The reading of stories of sports often accompanies social development in boys.

21. Factors which seem to determine children's choices of material are chiefly: interest, both natural and induced; recommendations of friends; recommendations of parents; titles; physical makeup of the book. This last item does not have much weight with some children, who are too experienced in reading to judge a book by its appearance. Many show a strong preference for extra-sized type and for well-illustrated books. The frontispiece seems to be an important criterion with many.

New books attract, but so do the older ones. Many have been rebound; and old bindings or second bindings are indicative of the popularity of those books, and so they frequently influence children's choice.

22. Interest in reading grows in a reading environment of this sort. Earnestness of purpose is always evident. Children from other schools have been admitted who have shown no desire to read at first but who within a short time have become adapted to the situation and have given evidence of keen enjoyment in the activity.

Study of the children's reading records reveals great breadth of interest in individuals as well as in groups. Their interests in general correspond with those of other boys and girls, as set forth by investigators in this field.

ARE THE SCHOOLS NEGLECTING THE FUNDAMENTALS?

Frequently the charge is made that the schools are giving their attention to nonessentials to the neglect of the fundamental subjects. Those who make such charges usually direct attention to the excellence of the schools of a generation ago as compared with the schools of today. Despite the fact that the boys and girls of today learn hundreds of things about which boys and girls a generation ago knew nothing, all well-documented comparisons reveal that the modern schools succeed in teaching the three R's much more effectively than they have ever been taught before.

To those who may be inclined to doubt the truth of the foregoing statement a booklet entitled *Examinations Seventy-five Years Ago and Today* (Yonkers-on-Hudson, New York: World Book Co., 1930) will prove illuminating. It is written by Louis J. Fish, educational statistician of the Boston public schools. In 1929 Mr. Fish gave to certain pupils in the Boston schools an examination which had been given as an entrance examination to the high school in 1853. He reports the following conclusions:

1. In 1853 twenty pupils took the examination for entrance to high school. Eighteen were passed as qualified.

In 1929 two hundred pupils (twenty each from ten different sections of the city) took the same examination under as nearly the same conditions as it was possible to make them. All were passed as qualified by the standards of 1853.

2. The candidates of 1853 had elected to pursue academic or classical courses. That was all the high school had to offer. They had been selected and drilled along such narrow lines as would, if possible, make their admission certain.

The candidate of 1929 had already made a choice of vocational, technical, or college-preparatory instruction. The selection was based on scholarship—not on the candidate's decision to attend high school. No special training for the examination was given.

3. In 1853 the examinations were given at the end of nine pre-high-school grades, and in 1929 the same examinations were given to pupils who had not completed eight grades of pre-high-school study.

4. The pupils of 1853 were trained with a concentrated program in only a very limited field of subjects.

The pupils of 1929 were trained in a curriculum far richer than that of 1853.

5. . . . . the candidates of 1853 made an average of 16.2 mistakes. (Percentages not given in 1853) Median 14.5.

The candidates of 1929 made an average of 8.9 mistakes. (Computed as in 1853) Median 8.9.

6. In 1853 the average number of mistakes by subjects was as follows: arithmetic, 5.4; grammar, 6.5; geography, 4.4.

In 1929 the average number of mistakes by subjects was as follows: arithmetic, 1.6; grammar, 3.1; geography, 4.2.

7. Direct comparison of the results of former examinations given to present-day pupils can rarely be made because of the few instances where both the examination and the results are given.

8. The results of this comparison indicate clearly the superiority of the pupils of today and of the training which those pupils are given in the fundamentals.

9. Despite the changes in purpose, procedure, and subject matter, the comparison would indicate that the child of today possesses a mental equipment at the end of eight grades of pre-high-school training sufficient to enable him to excel, as judged by the narrow factual examinations given at the end of nine grades in 1853.

10. While formal grammar is not emphasized so much as formerly, the present-day pupils were more successful in the examination than were the candidates of 1853.

11. Placement geography, so important a part of the curriculum in 1853, is today stressed only moderately in our schools. The 1929 pupils, however, still excelled by a narrow margin in this subject.

12. In arithmetic the present-day pupil found little difficulty with the 1853 examination. The extraordinary stunts in the fundamental processes as required show that formerly the pupils were drilled with a great deal of emphasis on the systematic use of numbers.

The pupil today is required to have a familiarity with practical examples which suggest but do not name the arithmetical operations. Nevertheless, the pupils of today excelled in this subject also.

13. As a general rule the boys of the present day excelled in the examination. One hundred twelve girls and eighty-eight boys took the examination. The girls averaged 9.6 mistakes. The average for the boys was 7.9.

14. In arithmetic the boys had an average of 1.5 errors, while the girls' average was 1.8 errors. In grammar the boys had an average of 3 errors, and the girls had an average of 3.2. In geography the boys had an average of 3.4, and the girls had an average of 4.7.

15. From the tabulated figures it appears that the boys did uniformly better in all three subjects. Contrary to expectations, there was only a small difference in arithmetic. Traditionally, at least, the boys had been expected to excel in this subject by a comfortable margin. In grammar there was very little variation between the result obtained by the boys and that obtained by the girls.

The largest disparity appeared in geography, where the average for the boys was much better than that of the girls.

16. The pupils of 1929 were trained with a curriculum far richer than that of 1853. The power gained through this added enrichment has given results as shown in this examination which the *narrow* curriculum of 1853 did not give.

17. Trained under the broader curriculum, with minds awakened along its varied lines, the pupils of today reveal themselves in this instance as more accurate and better skilled in the specific knowledge of the narrow curriculum than did the pupils who were trained chiefly in the three R's seventy-five years ago.

18. It would appear that the problem-solving and problem-finding points of view, so emphasized in the educational procedure of the present day, result in the development of initiative and independence which surpass that developed by the intensive drill and memory work of former years. The boys and girls of today are better able to meet the test of a new situation because they are better trained in marshaling the facts on which accurate thinking is based. . . . .

19. A comparison of the average number of errors for each of the ten schools in 1929 with the average of the 1853 group . . . . discloses some interesting facts. In none of the ten schools was the average number of errors in arithmetic even half as great as the average number of errors of the 1853 group. In none of the ten schools is the average number of errors in grammar as great as for the 1853 group, and in only three of the schools is it more than half as great. In four of the schools the average number of errors in geography is greater than the average number of the 1853 group. In no school is the average number of total errors as great as for the 1853 group, and in only two schools is it more than three-fourths as great.

PUBLICATIONS OF THE UNITED STATES OFFICE OF EDUCATION

The United States Office of Education makes the following announcement.

Five new bulletins and one pamphlet of the Office of Education are in process of publication and will be available from the Superintendent of Documents, Government Printing Office, Washington, D.C., within the coming month.

Teachers' Guide to Child Development, a manual for kindergarten and primary teachers, makes available to the nation's teachers the major part of the recommendations of the California curriculum commission. As Office of Education Bulletin No. 26, 1930, it is being published simultaneously with the California publication. It suggests activity programs for all types of schools within the kindergarten-primary range. The bulletin replaces Bulletin No. 16, 1919, which is now out of print.

The library division of the Office of Education has compiled a *Bibliography of Research Studies in Education, 1928–29*, which will be released as Bulletin No. 23, 1930. This comprises 275 pages of references to research in all fields of education. It is the third of the annual printed publications of educational research.

Housing and Equipping the Washington Child Research Center, Pamphlet No. 13, gives concrete examples of the costs, equipment, and other factors entering into the establishment of a research-type nursery school.

A list of all accredited high schools in the United States will be made available in the Office of Education Bulletin No. 24, 1930, *Accredited Secondary Schools*.

The first study of an educational system of a foreign country issued by the Office of Education since 1922 will appear upon the delivery by the public printer of Bulletin No. 17, 1930, *Secondary Education in Norway*, by Gabriel E. Loftfield, Mount Vernon Junior College, Mount Vernon, Washington.

Land-Grant Colleges and Universities, Bulletin No. 28, 1930, gives a résumé of statistics and information related to this group of institutions for the year ending June 30, 1929.

THE USE OF EXPERIMENTAL SCHOOLS IN CURRICULUM REVISION

In a bulletin bearing the title *Curriculum Revision and Development in Houston, Texas (1924–30)*, Superintendent Oberholtzer describes in some detail the principles and methods of curriculum revision which are being employed in that city. Of special interest is the attempt to evaluate changes by the establishment of a number of curriculum schools in which the new curriculums will be taught. The plan calls also for a number of control schools which will serve to check the results of proposed changes. In this way it is hoped to place curriculum construction on a more objective and scientific basis. The following statement is quoted from the bulletin.

In the following pages is presented a tentative plan of the organization and set-up (together with a brief discussion) of a group of curriculum schools opened in September, 1929, as a part of the city system of schools in Houston.

The general plan of these proposed schools was presented by the superintendent, in the spring of 1929, to the Board of Education of the Houston Independent School District for appraisal and approval. After thorough discussion as to the advantages of having such a group of schools function as a part of the city school system, as set forth by the superintendent in his recommendations, the Board of Education approved the plan and authorized the installation of such schools. . . . .

In a public-school system there are certain factors which condition the progress as well as the type of work that may be carried on. Experimentation for the sake of pure research is rarely justifiable in a public school. It is therefore evident that curriculum schools in a public-school system must observe with propriety the weal of the general good reduced to a practical method of procedure in all attempts to create a new or improved order. For this reason, these curriculum schools are conducted in such manner as to constitute no radical de-

parture from customary practice in the Houston schools, but vary only to the extent that such practice may be readily utilized by the rest of the city schools in the primary purpose of the curriculum schools. Facing limitations that are legal, such as state-adopted textbooks, a required course of study by subjects, as well as such limitations as are generally present in a large corps of teachers, some of whom are well trained, others with limited training, and added to these the further limitations of equipment and accommodations, and the appropriate means for educating the general public, these curriculum schools must be developed in such a way as to be of greatest service to the entire school interests of the city. Therefore, these schools must interest themselves first of all in improvements which can be practically applied in public-school situations, consisting essentially of more progressive and serviceable curriculums and more efficient methods of teaching.

In so far as these limitations permit and as the functions of these schools are enhanced, the use of scientific methods and procedures of promise are being used. . . . .

The purposes, then, of the curriculum schools are essentially to *test*, *evaluate*, *appraise*, and *validate* the present practices of the Houston schools in the light of best scientific study and practice and *make such adaptation* as will most effectively meet the needs of the Houston schools for maximum improvement; and to *revise* or *construct* new curriculums for Houston, guided by the same principles used for scrutinizing its own practice, and to *prepare* for their *installation* in the other city schools in order that best practice may be used to supplement and improve teaching methods and results in Houston.

The curriculum schools of Houston are those schools so designated by the superintendent in accordance with the policy approved by the board of education. They are conducted as regular schools of the city, serving a regular territorial district and subject to such regulations as apply generally to all schools.

The purpose of such schools is to function jointly and integratedly with the regular schools of the city, with such additional service as the specialized work may necessitate.

The general control of such schools is the same as that of other city schools, subject to such variations as may be directed by the superintendent of schools.

The general policy is the same as that of other city schools, subject to such variations as the superintendent may direct or as may be determined by the General Cabinet and approved by the superintendent. All variations affecting general policy are approved by the superintendent and board of education.

The general administration of such schools is the same as that of the regular schools of the city, but certain supplemental or advisory committees may be formed, subject to the general rules and regulations governing all schools. In general, there is little change necessary, but the function of organization and administration is used as a means and not as an end and, as such, is flexible enough to meet the needs for achievement of the educational objectives of such schools. Administration is considered as that activity which has for its function the putting into operation of the full program of the school in its complete rela-

tion to instruction, curriculum production, and complementary activities. In this respect the principal is completely responsible for the efficiency of all school activities in so far as adequate means are provided. Furthermore, the principal is in direct charge of supervision of such schools, of specialized activities as well as general supervision. Special supervision, however, may be added as needs arise.

Instruction is carried on in much the same way as in the regular schools, the teacher being the responsible agent for the schools, directing teaching of the children, both within and without the classroom, in accordance with the adopted policies of the board of education and superintendent. This general statement of policy, however, is not interpreted to define a particular method or to restrict that freedom in teaching necessary to attain the end for which such instruction is given, as set forth by the general or specific objectives of the school.

Research is being used as the agency for obtaining objective information, for appraisal of values, and for determining policy and procedure where such a method is practical. In general, the problems of research arise from situations in the schools of Houston. . . . .

A group of schools selected from the regular schools of Houston are designated as checking schools. These schools function in the regular way, using the staff already assigned and the regular curriculum provided for all the schools. There has been set up the necessary relationship between these schools to maintain full co-operative effort in the functions assigned. The chief function of these schools, in addition to regular functions, is to serve as check schools in such matters as articulation, evaluation, validation of procedures and practices as related to all schools of the city. Such schools are paired with curriculum schools in accordance with the assigned functions of the curriculum schools and the potential ability of the checking school to function in the particular field. The specific relationship and functions of these checking schools will become more definitely defined as the work of the curriculum schools progresses.

A GUIDE TO THE STUDY OF THE OREGON TRAIL

The United States Office of Education Bulletin No. 27, 1930, entitled *Notes on the Oregon Trail*, contains extracts from a large number of writers who describe various aspects of the migration which began one hundred years ago when the first wagon train left St. Louis for Oregon. The bulletin was prepared especially to assist teachers who plan to commemorate the anniversary of the covered wagon, but it should prove of interest to all teachers of social sciences. An extended bibliography on the western movement is included and should prove particularly valuable to teachers. From the extracts in the bulletin the teacher may determine which books should be added to the library or borrowed for temporary use. Through the courtesy of the Interlibrary Loan Service, any book listed may be borrowed from the Library of Congress.

PROCEDURES EFFECTIVE IN IMPROVING PUPILS OF POOR READING ABILITY IN REGULAR READING CLASSES

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One of the objectives to be realized in the elementary school is mastery of the fundamentals. The ability to read well is one of the important fundamentals. While many pupils are able to read effectively when they reach the low-fourth grade, not all pupils in the fourth grade are able to read as well as they should, and special classes for the poor readers are necessary.

An experiment was conducted in Richmond, Indiana, during the school year 1929–30 in order to determine how many poor readers there were in the intermediate grades and to what extent they could be taught to read. It was proposed (1) to discover the pupils in Grades IV–VI whose reading abilities were below their grade level, (2) to organize the work in reading in such a way as to provide special help for the poor readers in the regular class period and in a short remedial class period, (3) to determine the class procedures to be used with these pupils, (4) to continue the remedial instruction from October 1, 1929, to May 1, 1930, and (5) to check results carefully to determine the progress made.

Discovering the pupils whose reading ability was below their grade level.—On September 18 and 19, 1929, all intermediate-grade pupils in the Richmond schools were given the Gates Silent Reading Test, Types A and C, Form 2. Table I shows the number of pupils taking the tests on both types and the class medians expressed in reading grades. On Type A the median for every grade except the low fourth equaled or exceeded the standard set by the maker of the test, and on Type C the median for every grade equaled or exceeded the standard. This statement, however, should not be taken to mean that every pupil passed the test with a reading grade equaling or exceeding the standard for the school grade in which he was working.

Table II shows the number and percentage of pupils who failed to make the reading-grade levels that they should have made. A study of this table shows (1) that 663, or 51 per cent, of the 1,292 pupils

TABLE I

NUMBER OF PUPILS IN GRADES IV–VI WHO TOOK GATES SILENT READING TEST, TYPES A AND C, IN SEPTEMBER, 1929, THE STANDARD READING GRADES ON THE TEST, AND THE MEDIAN READING GRADE ATTAINED BY THE PUPILS IN EACH GRADE TESTED

GRADE	NUMBER OF PUPILS	STANDARD READING GRADE	MEDIAN READING GRADE ATTAINED BY PUPILS TESTED	
			Type A	Type C
Low-fourth	290	4.0	3.9	4.2
High-fourth	190	4.5	4.5	4.5
Low-fifth	243	5.0	5.0	5.5
High-fifth	186	5.5	5.5	6.5
Low-sixth	246	6.0	6.0	7.0
High-sixth	137	6.5	7.5	7.5
All grades	1,292	.....	.....	.....

TABLE II

NUMBER AND PERCENTAGE OF PUPILS IN GRADES IV–VI WHO FELL BELOW THEIR GRADE LEVELS IN SEPTEMBER, 1929, ON GATES SILENT READING TEST, TYPES A AND C

GRADE	PUPILS BELOW GRADE LEVEL ON TYPE A ONLY		PUPILS BELOW GRADE LEVEL ON TYPE C ONLY		PUPILS BELOW GRADE LEVEL ON BOTH TYPES	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Low-fourth	53	18	17	6	98	34
High-fourth	35	18	17	9	51	27
Low-fifth	51	21	12	5	56	23
High-fifth	34	18	13	7	50	27
Low-sixth	52	21	5	2	54	22
High-sixth	17	12	5	4	43	31
All grades	242	19	69	5	352	27

taking both tests failed to make reading grades corresponding to their school grades in one or both types and (2) that a greater percentage failed on Type A only than failed on Type C only. If the reading ability of every intermediate-grade pupil was to be im-

proved until he could secure the proper reading grade on these tests, 663 pupils would need remedial work in reading.

Discovering and classifying the reading difficulties of the pupils.—In order that the program of remedial work should yield maximum results, it was necessary to determine why the pupils were unable to make satisfactory scores on the tests. The causes could not be determined by a study of the results alone since the results showed only right and wrong answers and did not show the difficulties under which the children were working. In order to determine the exact difficulty of each pupil as nearly as possible, the teachers conducted

TABLE III

NUMBER OF PUPILS IN GRADES IV–VI WHO WERE STUDIED INDIVIDUALLY TO DETERMINE READING DIFFICULTIES

Grade	Number of Pupils
Low-fourth	137
High-fourth	84
Low-fifth	103
High-fifth	84
Low-sixth	103
High-sixth	61
Total	572

informal tests with the pupils whose reading grades were below the standard. The pupils were asked to read aloud material which pupils of their age and grade should be able to read. The pupils read selections of different types, such as literature, history, geography, and nature-study. As the children read, the teacher noted the difficulties encountered. Informal tests in silent reading were also conducted to determine how well the pupils got the meaning from a selection. Table III shows the number of pupils in each grade who were thus given individual study. After the reading was completed, the difficulties of each pupil were listed under his name. The following are samples of the records made.

HAROLD JONES

1. Knows few words at sight.
2. Does not attempt to pronounce words which he does not recognize.
3. Reads aloud by words.
4. Does not comprehend what he reads.

1. Reads orally very well.
2. Misses many questions on material read silently.

Table IV gives the number and percentage of pupils encountering each of thirteen types of difficulty. A study of Table IV shows that a wide variety of difficulties was encountered and that some difficulties were more common than others. If every pupil was to receive help in attacking his particular disability in reading, it was necessary to recognize and provide for help on each difficulty. Because of the great variety of difficulties and the large number of children, the problem was to organize groups that took recognition of the needs of the individuals within the groups.

Planning the reading period and the period for remedial work.—In the intermediate grades in Richmond, forty-five minutes a day are given to reading. This amount of time does not include that spent in reading geography, history, language, arithmetic, or nature-study material in these grades. The last thirty minutes of the school day is set aside for individual instruction. The teachers have this time to take care of particular problems in their departments. The reading teacher cannot use this period every day; at the most, she has no more than one or two days a week, for the teachers in other departments must have their share of the time. Therefore, a teacher of reading in the intermediate grades has forty-five minutes every day plus one half-hour period a week to take care of the reading work of the good, average, and poor readers.

It was clear that all remedial work could not be done in one half-hour period a week. Consequently, it was necessary to plan the regular reading period so that all groups of pupils would be served according to their reading needs. In order to do this, a teacher must group her class carefully. An illustration will make this clear. One high-fifth–grade class consisted of forty pupils. Of the forty, eight were definitely in need of remedial instruction that would help them to gain ability to unlock words, that would build up a body of sight words, and that would help them to group the words correctly in reading. Of the remaining thirty-two pupils, ten were in need of instruction that would help them to get the thought from the printed page. Twenty-two pupils read with ability equal to the standard of their grade. At the beginning of the experiment, the teacher divided

TABLE IV

NUMBER AND PERCENTAGE OF PUPILS IN GRADES IV–VI WHO ENCOUNTERED THIRTEEN DIFFICULTIES IN SILENT READING

DIFFICULTY	LOW-FOURTH GRADE		HIGH-FOURTH GRADE		LOW-FIFTH GRADE		HIGH-FIFTH GRADE		LOW-SIXTH GRADE		HIGH-SIXTH GRADE		ALL GRADES	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Limited sight vocabulary	83	61	54	64	61	59	45	54	58	56	31	51	332	58
Lack of comprehension	77	56	27	32	39	38	37	44	43	42	29	48	252	44
Faulty phrasing or lack of phrasing	62	45	33	39	42	41	33	39	40	39	22	36	232	41
Inability to unlock unfamiliar words	67	49	32	38	36	35	26	31	36	35	19	31	216	38
Lack of attention to punctuation	16	12	10	12	22	21	10	12	17	17	6	10	81	12
Repetition	9	7	5	6	18	17	9	11	10	10	3	5	54	9
Slow reading	11	8	6	7	8	8	2	2	6	6	5	8	38	7
Dislike of reading	2	1	3	4	8	8	5	6	6	6	3	5	27	5
Omission of words	6	4	1	1	8	8	2	2	3	3	2	3	22	4
Insertion of words	1	1	1	1	0	0	2	2	2	2	1	2	7	1
Lip-movement	8	6	2	2	2	2	1	1	1	1	1	2	15	3
Losing the place	1	1	1	1	2	2	2	2	2	2	0	0	8	1
No apparent reason for failure in tests	4	3	2	2	1	1	3	4	3	3	0	0	13	2

the forty pupils into three groups; Group 1 contained the twenty-two pupils who needed no remedial instruction; Group 2, the ten pupils who needed instruction in thought-getting; Group 3, the eight pupils who needed remedial instruction of the three types mentioned. Having thus grouped the pupils, the teacher was able to serve every pupil in her class. After four weeks' time, Group 2 was able to use the material used by Group 1, and the teacher then had but two groups.

The weekly half-hour period was used by the teachers of reading to instruct pupils who were especially in need of help. In this group might be found pupils from the low-fourth to the high-sixth grades. A special effort was made to help the pupils in such a way as to increase the satisfaction derived from their regular reading period. Pupils were anxious to attend the weekly half-hour classes in which remedial instruction was given.

The organization of the groups having been perfected, the next step was the determination of the actual classroom procedures for helping the pupils to overcome their particular reading difficulties. An outline of teaching procedures was made to fit each difficulty. A search was made through the literature bearing on remedial work in reading, and the Twenty-fourth Yearbook of the National Society for the Study of Education[1] was especially helpful. Many of the references given at the ends of the chapters in the yearbook were valuable. The teachers also contributed their experiences with various methods and devices. The outline for the teachers' use was then prepared and was used throughout the year. Additions were made to the outline during the year, and some suggested procedures were dropped when they were found to be ineffective. In May, 1930, the suggestions were brought together, and the following revised outline was made, which gives the list of classroom procedures that were used by the teachers in helping pupils to overcome particular reading difficulties.

Suggestions for Helping Pupils To Enlarge Their Sight Vocabularies

1. Conduct drills every day on the words that pupils do not know. These words can be collected during the oral- and silent-reading periods. The words

[1] *Report of the National Committee on Reading.* Twenty-fourth Yearbook of the National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Co., 1925.

should be placed in phrases for drill. As far as possible, all drill should be conducted with emphasis on the content.

2. Give much easy reading in which the unfamiliar words occur.

3. Vary the position of words and phrases in content by devising new stories in which the troublesome words are found. These stories can be written on the blackboard or on the hectograph.

4. Encourage each pupil to keep a list of common words with which he has had trouble and to go over the list from time to time in his leisure periods.

5. Encourage pupils to make a word a sight word after they have unlocked the word in study.

Suggestions for Helping Pupils To Improve Comprehension

1. Read nothing except for the thought.

2. Vary assignments to fit the objectives sought.

3. Check the pupils' work daily to be sure that they are getting the thought.

4. Give lessons to correct the errors discovered in the daily checking in order that the pupils may know which of their answers are right and in order that they may learn how to verify answers by reading the text.

5. Conduct lessons in which the pupils are taught to interpret questions asking "when," "why," and "who."

6. Conduct lessons in which the technique of doing the work of an assignment is explained to the pupils. Lessons in technique should always be given before pupils are asked to do the work independently.

7. A progress sheet showing the improvement made by individual pupils stimulates and encourages greater effort.

8. Make a study of the work of the pupils in geography, history, arithmetic, and science to determine to what extent their ability in thought-getting is affecting their success or failure in these subjects.

9. Help individual pupils during the study periods.

10. As far as possible, use material dealing with current topics.

11. Always provide a motive for oral reading. Pupils may read aloud to the group the most amusing, the most exciting, or the most pathetic part of a story.

Suggestions for Helping Pupils To Phrase Correctly

1. Provide much simple reading so that the pupils will not interrupt the phrasing by stumbling over unknown words.

2. Give examples of reading by phrases. Allowing pupils to read with you helps them to learn rhythmical eye-movement.

3. After the pupils have been convinced that they should see the words in groups, give much simple material to be read silently in a given time. The reading of such material should always be checked for thought-getting.

4. Do not approve reading that does not sound like talking. Dramatization in connection with the reading will help to secure naturalness.

5. Provide daily drill in reading phrases, and encourage the pupils to read as much as possible in one glance.

6. Show pupils how punctuation marks may be used to help them in phrasing.

Suggestions for Helping Pupils To Unlock Unfamiliar Words

1. Conduct lessons in which pupils are shown the best ways of determining the pronunciation of words. Oral lessons may be given to a group, or suggestions may be given to individuals when they ask about words in their silent study. Some suggestions are: (*a*) In a polysyllabic word search for the largest known whole. (*b*) Fit the word into the context. (*c*) Expect certain words because they should fit into the context. (*d*) Recognize an unknown word by means of its likeness to a known word. (*e*) Go through a word, and pick out the known phonetic elements.

2. Encourage pupils to make attempts to pronounce unfamiliar words rather than to pass them over or to ask for help. Often pupils do not do as much as they can because they lack the courage.

3. Hold pupils responsible for the words they have unlocked. A pupil should not need to unlock a word more than once.

4. Conduct drill on the phonetic elements of which pupils do not have command. This drill should always be in content.

5. Use the dictionary to verify a pronunciation which a pupil thinks is correct. Before a word is found in the dictionary, the pupil should have some notion as to its pronunciation.

6. Learning the meaning of words must accompany the learning of their pronunciation.

7. Study prefixes and suffixes.

8. Study the relations of words, and show that various words contain the same elements, for example, "telegraph" and "phonograph."

Suggestions for Helping Pupils To Give Attention to Punctuation[1]

1. Give pupils practice in reading short sentences from the board or from books, and insist that they give attention to the punctuation in order to make the meaning clear.

2. Conduct lessons dealing with the commoner marks of punctuation, and bring out their meaning and use.

3. Before they read aloud, allow pupils to read silently all work that is to be read orally.

4. Show pupils how a change of punctuation may change the meaning of a sentence. Pupils like to hunt for examples and read them to the class.

[1] Giving attention to punctuation is closely allied to correct phrasing, and suggestions given for improving phrasing may also be used in the work on punctuation. It is to be remembered that not all pauses are designated by commas or periods.

Suggestions for Helping Pupils To Overcome the Habit of Repeating

1. Allow pupils to read over all material before asking them to read it aloud. They will then have some notion of what is coming.
2. Encourage the pupils to force themselves to go on. If a pupil stumbles, allow him to stop a second or two to calm himself, but do not allow him to repeat.
3. Allow pupils to read short paragraphs more than once in order to convince themselves that they can read without repeating.
4. Read aloud with a pupil, and insist that he read with you and go on at any cost.
5. Give practice in phrasing.
6. Read a short paragraph yourself to show pupils how it sounds when well read.

Suggestions for Helping Pupils To Read Rapidly

1. Encourage pupils to read across the page as rapidly as possible.
2. Conduct lessons in which pupils read for thought with a time limit.
3. Conduct lessons in reading phrases. This exercise will promote fast reading.
4. Give pupils opportunity to read much simple material, and test their comprehension at the end of the lesson.
5. Have pupils re-read material against time. This exercise will assist pupils to realize that it is possible for them to read rapidly.
6. Give pupils different kinds of reading material so that they will learn to recognize material that should be read rapidly.

Suggestions for Helping Pupils To Acquire a Liking for Reading

1. For leisure reading give pupils simple materials about topics that will interest them.
2. Keep progress sheets so that the pupils will realize that their ability to read is improving.
3. Give each pupil a list of the particular difficulties which he should attempt to overcome.
4. Whenever possible, allow pupils to read selections to the group. The selections should always be read well.
5. Go with pupils to the library to select their books so that they will choose appropriate books.
6. Conduct free-activity periods in such a way that pupils will realize that reading unlocks interesting subjects.
7. Make the introduction of new books as interesting as possible.

Suggestions for Helping Pupils To Overcome Habit of Omission or Insertion of Words

1. Allow pupils to read over all material before it is read aloud.
2. When a pupil omits or inserts a word in oral reading, always call his attention to the error.
3. Encourage the pupils to read with much care until they can read a selection without omitting or inserting words. Care will need to be used that the pupils do not substitute the habit of slow word-reading for the habit they are trying to overcome.
4. Read with a pupil, insisting that he keep with you in the reading.
5. Check the pupils' sight words to be sure that the omission or insertion of words is not caused by inability to call common sight words.

Suggestions for Helping Pupils To Study without Lip-Movement

1. Make clear to the pupils the effect of lip-movement on their success in reading.
2. Watch the pupils during the study periods. If a pupil is found moving his lips when reading silently, call his attention to the fact.
3. Encourage pupils to watch themselves.
4. Allow pupils to put a finger on their lips from time to time.

Suggestions for Helping Pupils To Learn To Keep Their Places

1. At first allow pupils to use markers. Take the markers away as soon as the pupils want to try reading without them.
2. Encourage pupils to move eyes along the line as if they were marching, without glancing to right or left or up or down.
3. Give pupils practice in glancing up when they are reading simple material and then finding the place again quickly.
4. Conduct exercises in which pupils read interesting material in a given time.

Checking the results.—On May 6 and 7, 1930, all intermediate-grade pupils were given the Gates Silent Reading Test, Types A and C, Form 1. Table V shows the number of pupils taking tests on both types and the class medians expressed in reading grades. The table shows that every half-grade made higher medians on both Types A and C than those set by the maker of the test.

A further check was needed to determine whether the pupils given remedial instruction in reading had gained in reading power. Of the 663 pupils whose reading abilities were below their grade levels in September, 1929, 413 pupils were in the elementary schools at the

time the tests were given in May, 1930. These 413 pupils had received the remedial instruction described.

Table VI shows the number and percentage of the 413 pupils whose reading grades were below the school grades in which they

TABLE V

NUMBER OF PUPILS IN GRADES IV–VI WHO TOOK GATES SILENT READING TEST, TYPES A AND C, IN MAY, 1930, THE STANDARD READING GRADE ON THE TEST, AND THE MEDIAN READING GRADE ATTAINED BY THE PUPILS IN EACH GRADE TESTED

GRADE	NUMBER OF PUPILS	STANDARD READING GRADE	MEDIAN READING GRADE ATTAINED BY PUPILS TESTED	
			Type A	Type C
Low-fourth	223	4.5	5.0	5.0
High-fourth	240	5.0	6.0	6.5
Low-fifth	189	5.5	6.5	6.5
High-fifth	220	6.0	7.0	7.5
Low-sixth	175	6.5	7.5	8.0
High-sixth	237	7.0	8.0	8.0
All grades	1,284	.....	.....	.....

TABLE VI

NUMBER AND PERCENTAGE OF PUPILS IN REMEDIAL GROUPS WHO FELL BELOW THEIR GRADE LEVELS IN MAY, 1930, ON GATES SILENT READING TEST, TYPES A AND C

GRADE	NUMBER OF PUPILS	PUPILS BELOW GRADE LEVEL ON TYPE A ONLY		PUPILS BELOW GRADE LEVEL ON TYPE C ONLY		PUPILS BELOW GRADE LEVEL ON BOTH TYPES	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
High-fourth	102	20	20	8	8	38	37
Low-fifth	74	12	16	8	11	18	24
High-fifth	76	21	28	6	8	17	22
Low-sixth	78	18	23	4	5	15	19
High-sixth	83	15	18	8	10	17	20
All grades	413	86	21	34	8	105	25

were working. A study of Table VI shows that, of the 413 intermediate-grade pupils receiving special help in reading, 188, or 46 per cent, had reading grades equal to the grade level in which they were working in May, 1930, and that 225, or 54 per cent of these pupils,

were still in need of improvement if their reading grades were to equal those of the regular school grades in which they were placed in May, 1930.

An attempt was made to determine whether the 413 pupils had made improvements in scores between September, 1929, and May, 1930. Table VII shows the median improvements in scores by half-grades. The National Intelligence Tests, Scale A, Form 1, was used to obtain the intelligence quotients of the 413 pupils. The median gain of the pupils in each half-grade is greater than the standard

TABLE VII

DISTRIBUTION ACCORDING TO INTELLIGENCE QUOTIENTS OF MEDIAN GAINS IN SCORES ON GATES SILENT READING TEST, TYPES A AND C, MADE BY 413 PUPILS IN GRADES IV–VI WHO RECEIVED REMEDIAL INSTRUCTION

RANGE OF INTELLIGENCE QUOTIENTS	HIGH-FOURTH GRADE		LOW-FIFTH GRADE		HIGH-FIFTH GRADE		LOW-SIXTH GRADE		HIGH-SIXTH GRADE	
	Type A	Type C	Type A	Type C	Type A	Type C	Type A	Type C	Type A	Type C
61–70	1	5	2	3	4	4	0	5	3	5
71–80	4	4	2	4	2	3	4	5	3	4
81–90	4	4	4	4	4	4	3	4	3	4
91–110	4	5	4	5	4	3	4	4	4	4
111–120	5	4	5	6	4	4	5	5	5	4
Above 120	7	3	.....	.....	8	3	4	4	10	2
All pupils	4	4	4	5	4	4	3	5	5	4
Standard gain	2	2	2	2	2	2	2	2	2	2

improvement given by the maker of the test. There is some indication that pupils with high intelligence ratings made greater improvement than pupils with low intelligence ratings; the three highest gains are in the highest intelligence range. The amount of improvement varies little from grade to grade.

An attempt was made to determine whether the pupils who had had special help in reading had reading ages equal to or above their mental ages as shown by the National Intelligence Tests. Table VIII shows that 90 per cent of the 413 pupils who had received special help had reading ages equal to, or higher than, their mental ages in May, 1930, in the tests on both types. Table IX shows that 10 per cent of the pupils had ages below their mental ages in May, 1930, in the tests on both types.

The following conclusions may be drawn from the study. (1) The use of remedial methods in regular class work—grouping pupils in special remedial reading classes according to the difficulties encountered—helped the intermediate-grade pupils who were studied to be-

TABLE VIII

NUMBER AND PERCENTAGE OF 413 PUPILS RECEIVING REMEDIAL INSTRUCTION WHOSE READING AGES ON GATES SILENT READING TEST, TYPES A AND C, WERE EQUAL TO, OR HIGHER THAN, THEIR MENTAL AGES IN MAY, 1930

GRADE	TYPE A		TYPE C		BOTH TESTS	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
High-fourth.....	4	4	13	13	72	71
Low-fifth.....	5	7	11	15	50	68
High-fifth.....	6	8	16	21	43	57
Low-sixth.....	2	3	21	27	50	64
High-sixth.....	4	5	20	24	53	64
All grades....	21	6	81	20	268	65

TABLE IX

NUMBER AND PERCENTAGE OF 413 PUPILS RECEIVING REMEDIAL INSTRUCTION WHOSE READING AGES ON GATES SILENT READING TEST, TYPES A AND C, WERE BELOW MENTAL AGES IN MAY, 1930

Grade	Number	Per Cent
High-fourth.....	13	13
Low-fifth.....	8	11
High-fifth.....	11	14
Low-sixth.....	5	6
High-sixth.....	6	7
All grades.....	43	10

come more efficient readers. (2) Although the amount of improvement made by the pupils in the remedial group was large, a considerable number of pupils were not reading up to their mental ability in May, 1930. These pupils were in need of further attention to determine, if possible, the factors which were holding them back.

THE ASSEMBLY PROGRAM IN OPERATION

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ORGANIZATION

There are three steps involved in planning, developing, and producing an assembly program, which may be described as (1) planning the program, (2) co-ordinating its activities, and (3) presenting the program. The production of an assembly program is a phase of the extra-curriculum program in which the student council may participate. The council may assume a great deal of responsibility by being allowed to appoint an assembly committee, which will assist in the administration of the assembly program. An organization of this kind requires co-operation between the assembly committee, the assisting teachers, and the pupils participating. The responsibility of various individuals and school groups in planning, developing, and producing assembly programs is shown in the following outline.

I. Planning the program
   1. Assembly committee
      a) Pupil members from student council
      b) Principal
         (1) Faculty sponsor

II. Co-ordinating the program
   1. Principal or faculty sponsor
   2. Home-room teacher
   3. Leader of music

III. Presenting the program
   1. Home-room teacher
   2. Participating pupils
   3. Assembly committee

Planning the program.—In the type of organization outlined the three factors concerned in planning the program are the principal, the faculty representative appointed by the principal as the sponsor

of the assembly committee, and the pupils representing the student council. The assembly committee should meet at stated intervals and should develop the program for one semester. After a program has been scheduled, it is desirable for the committee to meet to approve the program proposed.

The faculty member of the assembly committee should be appointed for the entire year or for not less than one semester. In some cases the same person may be appointed from year to year. This person actually assumes the principal's responsibility, which may be delegated to a teacher who enjoys this type of work and who can do it better than the principal. This teacher must have tact, originality, and executive ability. With these three characteristics and a liking for the work, such a person will become an expert in a short time. Theoretically, the principal and council, through the assembly committee, are responsible for initiating the assembly program. However, its success depends upon the skill of the faculty sponsor in directing and encouraging the group in the development of assembly programs.

Co-ordinating the program.—The co-ordination of the activities of the assembly program is the second step in its development. The three persons who are responsible for bringing together the various parts of the program are the principal, the home-room teacher or the teacher of the group presenting the program, and the music leader. If the duty of presiding at the presentation of the program is shared by pupils and principal, the principal will always have a small part in every program if it is nothing more than the introduction of the chairman of the day. As music should be a part of every program, it is necessary for the music leader to co-operate with the principal and the teacher of the group presenting the program. Nothing does more to give a program a good beginning than the music which is offered. Although the faculty sponsor of the assembly committee is not concerned directly with the co-ordination of the program, she has not released any responsibility for its success. She has simply called in the principal, the music leader, and the home-room teacher of the group presenting the program for the purpose of co-ordinating the various activities of the program to be presented.

Presenting the program.—For the success of the presentation of a program the home-room teacher and her assigned group are responsible. The faculty sponsor of the assembly committee can do little to help the presentation by the group. The assembly committee should feel a certain amount of pride in the success of programs. Unless this group feels a certain responsibility, the purposes of pupil participation in direction and control are not realized and the assembly has not accomplished its full purpose even though participants and audience benefit to the fullest extent.

PLANNING THE PROGRAM

The assembly committee.—Wagner states that the following duties should be performed by the assembly committee.

1. It should work out a procedure acceptable to the school as a whole, making it possible for individuals, organizations, and departments to obtain readily the privileges of presenting worthy programs.
2. It should stimulate competition for this privilege.
3. It should receive requests for this privilege, act upon, and dispose of them promptly.
4. It should initiate and receive suggestions for the improvement of the assembly.
5. It should schedule programs several weeks in advance and place copies of programs in the principal's office.
6. It should censor all programs in due time for necessary changes.
7. It should insure that all pupils are properly prepared for the assembly.
8. It should see that all assemblies start on time and that they conform to a reasonable period, generally forty-five to fifty minutes.
9. It should encourage high standards of art, music, ideas, etc., on the part of all who are on the program. Parents look to the school for a high standard of programs.
10. It should, like everybody, be led to feel that all its criticisms should result in constructive changes or suggestions, not merely in destructive criticism.[1]

Although the duties as described were worked out for a high-school committee, they are applicable to a committee organization in an elementary school.

Length and time of program.—Wagner believes that it is wise to have the assembly program during the first period on Friday. He gives the following arguments for this time.

[1] M. Channing Wagner, *Assembly Programs*, pp. 40–41. New York: A. S. Barnes & Co., 1930.

It is the consensus of opinion of many principals that the first period of the school day is better than any other because it has the advantage of causing less interruption to classroom work than if the program is held during any subsequent period. This period also has the additional advantage of enabling the school orchestra and others taking part to get ready before school actually begins.[1]

In a study of some forty assembly programs the writer found that the majority were held between the hours of ten and eleven, but there is some disagreement in prevalent practices. In many high schools there is a tendency to schedule assembly programs during the activity period as this arrangement causes no conflict with the academic schedule.

The author experimented with two time schedules for assembly programs in an elementary school. One was forty-five minutes and the other thirty minutes in length. The final conclusion of the teachers concerned was not only that the half-hour period was long enough but that it seemed to be an ideal length of time. In order to make a half-hour program successful, it is necessary to eliminate routine announcements and to have a well-planned and well-conducted program. One number must follow another without delay and without any break in the program which allows the interest to lag. The teachers concluded that in a forty-five–minute period it is almost impossible to conduct a program which can hold the interest of elementary-school pupils from beginning to end.

Scheduling programs.—After the assembly committee has been organized, its first important duty is to make up the semester schedule of assemblies. A few suggestions as to procedure may be of sufficient value to include here.

1. It is advisable to plan programs for an entire semester or term.
2. Obtain a list of the dates of programs from the principal.
3. Reserve any dates requested by the principal for special programs, outside speakers, etc.
4. Place on the schedule the dates of programs falling near national holidays, etc.
5. Notify the teachers who are to assist in the programs, and have them hand in general outlines of the programs to be given.
6. Study the tentative programs, and assign the dates so that the schedule will be varied.

[1] *Ibid.*, p. 26.

7. Notify other teachers of types of programs which are needed at specific times to complete the schedule.

8. Secure the approval of the principal.

9. Post a bulletin giving information to pupils and teachers alike as to future programs. If a teacher's bulletin is used, the entire schedule should be included.

CO-ORDINATING THE PROGRAM

Preparation of the program.—After the schedule has been posted, it should be the duty of the faculty sponsor on the assembly committee to see that a rehearsal of each program is presented. This plan may seem a hardship at first, but it insures performances that will move swiftly and show the characteristics of well-planned programs. After the rehearsal has been approved, a detailed program should be drawn up and typewritten. Copies should be filed with the principal, with the person who acts as chairman of the program, and with the faculty sponsor on the assembly committee.

Content of the program.—When a teacher and her group plan a program, there are certain things to be kept in mind which determine its content. The teacher must be acquainted with the values to be realized and must remember that three groups of pupils are expected to receive benefits from the program, namely, those planning the program, the audience, and the participants. It must be remembered that the assembly offers a learning situation. The program must offer an opportunity for the three groups concerned to practice certain desirable habits. This philosophy leads to the conclusion that the assembly should not be maintained as an administrative device but that its programs should be varied, interesting, and entertaining. Practically all programs should grow from the general school life, both curricular and extra-curriculum. With the other extra-curriculum activities the assembly should be an agency for supplementing the curriculum in bringing about a better realization of the objectives of education.

Responsibility for individual programs.—Wagner has discussed the assignment of general responsibility for the assembly program as follows:

> The general responsibility for the assembly program should rest on the pupils of the school. Of course, as head of the school, the principal is, in one sense, responsible for everything that goes on within the school and hence is responsible

for the assembly, but the students should never get the idea that it is the principal's business to see that they get an interesting, entertaining, and worthwhile program. The students should feel proud when a good program is given, and a poor program should give them a feeling of personal failure. There is only one way to give the student this feeling of responsibility, and that is to give him responsibility. . . . .

Good administration calls for someone to be personally responsible for all assembly programs. That is, if a club gives a program, have one person within the club responsible for the club's activity as far as that program is concerned. By doing this, the principal or director of activities can check upon the work that is being done, urge to greater endeavor, and more easily locate failures. The sponsor responsible for the program will make a greater effort to prepare the most interesting and worth-while program.[1]

PRESENTING THE PROGRAM

Presiding officer.—Several plans are used in introducing the various features of the assembly program. In many schools the principal takes entire charge of the program, in others it is handled by the principal in co-operation with a pupil, and in still others a pupil group takes entire charge. The type of organization described in this article demands that principal and pupils share in presiding. The principal should not be entirely eliminated as he has a certain responsibility which should not be done away with, especially in the elementary school where an unexpected situation might result in a need for the principal to assume responsibilities which would embarrass a pupil chairman.

The plan of sharing the duties of the presiding officer between principal and pupil is a compromise. The principal introduces the pupil chairman and can then be called on in emergencies. As long as the program moves according to schedule, the pupil is in charge. It also seems advisable for the principal to close each meeting. Sometimes a program will close early; and, when no arrangements have been made for the use of the remainder of the time, the principal's assistance will be welcomed. In the elementary school the principal may be regarded as the presiding officer, while a pupil member of the group sponsoring the program acts as the chairman of the day and introduces the various parts of the program. At the end of the program the pupil turns the chair back to the principal.

[1] M. Channing Wagner, *op. cit.*, pp. 31–32.

Audience.—Galvin and Walker list the following habits which should be developed in the audience.

1. Listening in order to gain information and enjoyment.
2. Regarding respectfully ushers and songbook monitors as officers of the school.
3. Remaining silent between numbers, so that time is not lost in regaining attention.
4. Sitting quietly during numbers, even though some parts appeal more than others.
5. Quick, economical seating (viz., filling each row, leaving no unoccupied seats).
6. Courteous behavior to teachers and guests (offering programs or yielding seats if auditorium is crowded).
7. Order and neatness (clean floor, seats closed when leaving).
8. Courteous attention to performers.
9. Hearty applause (not too long or rhythmic).[1]

The habits listed are those which characterize a respectful audience. The program should be planned and presented in such a way that the pupils will conduct themselves in a mannerly fashion because they are interested in the program and not because the principal makes certain requirements. Pupils should be made to realize that it will occasionally be necessary to be polite when the program does not deserve attention. However, if uninteresting programs are given week after week, good habits will not be developed in the audience regardless of rules and regulations governing conduct.

Parents should be welcomed at every opportunity and especially on days when their children are participating in the program. When parents arrive, they should be met by auditorium monitors and escorted to seats reserved for guests.

Organization of the program.—A thirty-minute program which has been found to be most successful in an elementary school is composed of the following parts.

Music	Orchestra
Song	School
The Lord's Prayer	School
Introduction of chairman	Principal
Program	Assigned group
Cheers	School
Song	School or orchestra
Dismissal	Principal

[1] Eileen H. Galvin and M. Eugenia Walker, *Assemblies for Junior and Senior High Schools*, p. 6. New York: Professional & Technical Press, 1929.

This arrangement allows the group presenting the program from fifteen to twenty minutes. The introductory music may be provided by the orchestra, which is likely to be composed of upper-grade pupils, and by various grades, who may present group songs or instrumental or vocal solos. Unless a music teacher is available, an orchestra is impossible.

Entering the meeting place.—In an elementary school it is not advisable to dismiss pupils from all the rooms at the same time and to allow them to congregate freely in large groups outside the auditorium doors. Because of the great divergence in the size of the pupils it is advisable to have pupils enter the room in an orderly manner. The traffic from various parts of the building should be routed so that it will be equally distributed. Even in a small school, with at least two floors and more than one stairway, the traffic should be routed so that there will be no congregating outside the auditorium doors. If other means cannot be found to provide for immediate and dignified entrance to the auditorium, the various rooms should be scheduled for dismissal at different times. In a small school in which half the school can see the entrance to the auditorium, it will be advisable for room monitors to stand in the doorways of their rooms and signal their groups when to leave.

All doors entering the auditorium should be used. Certain rooms should use certain doors both when entering and when leaving the auditorium. If a section of the auditorium is permanently assigned to each grade, room monitors can conduct their groups to their seats without direction from home-room teachers. Auditorium monitors may be appointed to assist the room monitors in conducting pupils to their seats.

When the pupils leave the auditorium, it will be advisable to have children in certain sections leave the room while the others remain standing before their seats. This movement is dignified, refined, and not too formal.

Test of a good assembly.—The following points are presented by Wagner as a test of a good assembly:

a) The joy pupils get in it
b) The economy of time shown in means and methods employed
c) The real benefits accruing to pupils from the satisfaction of doing

d) The extent to which the assembly—
  (1) Grows out of curricular activities and returns dividends
  (2) Explores the various subject-matter departments thus revealing higher types of activity, making them desirable and to an extent possible
e) The evidence of the gradual extension of interest in social service—
  (1) From interests in the whole school—
  (2) To interests in relationships and responsibilities outside the school[1]

Galvin and Walker have prepared a similar test which is applicable to elementary schools.

a) Does it provide opportunity for the entire group?
b) Are individual performances creditable?
c) Do students, properly guided, plan and execute it?
d) Is the plan unified?
e) Is the aim of the assembly clear, and is it effectively accomplished?
f) Are mechanics carried out properly (viz., curtain, time, seating, properties, lights)?
g) Do performers and audience recognize the assembly as successful from the viewpoint of their interest and enjoyment?[2]

The three phases involved in the development of an assembly program have been described as (1) planning the program, (2) coordinating its activities, and (3) presenting the program. In the development of a procedure for each phase, which has been described in the preceding pages, certain fundamental principles have been kept in mind, namely, (1) that the assembly program should furnish a learning situation to those planning the program, to the audience, and to the group participating in the program; (2) that, when the values of the assembly program are determined, each of these three groups must be considered; (3) that the entire development, to be truly worth while, must appeal to the interests of the pupils; and (4) that the program should develop from the curriculum and, to a degree, should enrich it.

[1] M. Channing Wagner, *op. cit.*, p. 41.

[2] Eileen H. Galvin and M. Eugenia Walker, *op. cit.*, pp. 13–14.

TRANSFER OF LEARNING IN SIMPLE ADDITION AND SUBTRACTION. I

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Modern writers on education describe learning as a decidedly complex process. We are told that learning is in the main specific. Transfer does exist, it is acknowledged, but let no one trust that it will take place. To be on the safe side, many educators today are specifically providing for the teaching of practically every item of subject matter which the learner should possess. In the process of addition, therefore, not forty-five simple combinations are taught but one hundred. In the teaching of subtraction, multiplication, division, and other phases of arithmetic similar practices are followed.

To test whether a child actually learns only the simple number combinations which he practices, the experiment described in this and a later article was undertaken. The investigation was limited to addition and subtraction.

PROCEDURE OF THE EXPERIMENT

Purpose.—The question on which information was sought was: If a child practices a given combination in addition or subtraction, does he in so doing also learn other combinations? Specifically stated, the question becomes: Does the learning of a combination like 6+0 give mastery likewise over a combination such as 8+0? Does the learning of 10−6 give a child facility also with such a combination as 10−4? Still differently expressed, the problem becomes: If children receive practice on only a portion of the one hundred addition and one hundred subtraction combinations, will they know as many of the total number as if they had practiced all of them?

Pupils.—Approximately thirteen hundred children in low-second grade in Detroit, Fordson, and Hamtramck, Michigan, were involved in the experiment. Approximately an equal number of pupils

took part from each of the three school systems. Only the first half of the second grade was used because it was desired to study children who up to the time of the experiment had had no formal teaching in school on the simple number combinations.

Teaching procedure.—The experiment was carried on from September, 1928, to February, 1929, a period of seventeen school weeks. Each teacher in the experiment was provided with daily lesson plans containing specific directions as to content and method of teaching for each day's recitation. The children had no arithmetic books. Each teacher was provided with an arithmetic textbook,[1] from which concrete problems and certain teaching techniques were selected according to directions in the lesson plans. Whenever this book was employed, the teachers adapted the wording to the combinations outlined in the lesson plans.

The experiment was so organized that the classes of some teachers were taught all the 100 addition and 100 subtraction combinations, 200 in all, and the classes of others were taught only 55 combinations in each of the two processes, 110 in all. A few classes received no instruction in formal arithmetic during the last twelve of the seventeen weeks; still others received no formal instruction on the combinations whatsoever. Again, of the total number of children taught arithmetic during the seventeen weeks, some classes during three minutes of the daily twenty-minute period were given instruction in generalizing groups of combinations. For example, these children were led to recognize the law common to zero combinations, they noted that combinations appeared in reverse form such as $6+7$ and $7+6$, and they observed that a combination such as $10-6$ was intimately related to $6+4$. The time which was spent by this group of children on the generalizing procedure was spent by the other children in drill on the combinations outlined for the day. With this exception, all children formally studying arithmetic were taught by a similar method.

Combinations left untaught.—The one hundred simple addition combinations and the one hundred simple subtraction combinations are shown on page 361. The forty-five combinations in each process

[1] C. L. Thiele, Irene Sauble, and Nettie Oglesby, *My First Number Book for Grades 2 B and 2 A*. Chicago: Rand McNally & Co., 1927. Pp. vi+134.

which were not taught to certain groups of children have been starred.[1]

The combinations which were not taught were not selected at random for several reasons. One reason was that corresponding combinations in addition and subtraction were taught. As the term is here used, a combination in subtraction "corresponding" to one in addition is such that the minuend in the subtraction combination equals the sum in the addition combination and the number to be subtracted is the same number as the first addend of the addition combination. Thus, $9-4$ corresponds to $4+5$. One of the principal reasons for teaching corresponding addition and subtraction facts was the desire that the combinations taught in addition should be, as nearly as possible, comparable to those taught in subtraction in order that better comparisons of the children's achievements in the two processes could be made. Another reason for not choosing combinations at random was that in the classes using generalization consecutive groups of combinations were occasionally presented together on the blackboard in order to facilitate the process of generalization. For example, $8+2$, $8+3$, $8+4$, and $8+5$ are consecutive combinations that were taught. Still another reason for not choosing at random the combinations to be left untaught was the desire that the difficulty of the untaught combinations should be equal to, if not greater than, that of the combinations which were taught. One method of achieving this result was to select the untaught and taught combinations so that in the case of addition there were similar proportions of combinations having the larger addend first and the smaller addend first and in subtraction similar proportions with the subtrahend smaller and larger than the remainder.

Another method of assuring that the untaught combinations were at least as difficult as the taught combinations was to use the findings of Frank L. Clapp.[2] From the four increasing quarters of

[1] It must be remembered throughout the article that some children were in reality taught all the combinations. The word "taught" will refer to the fifty-five combinations in each process taught to all children formally studying arithmetic, and the word "untaught" will refer to the forty-five combinations in each process which were not taught to children in certain classes.

[2] Frank L. Clapp, *The Number Combinations: Their Relative Difficulty and the Frequency of Their Appearance in Text-Books*. Bureau of Educational Research Bulletin, No. 2. Madison, Wisconsin: University of Wisconsin, 1924.

Addition Combinations

0+0	2+0*	4+0*	6+0	8+0*
0+1	2+1*	4+1	6+1*	8+1*
0+2	2+2	4+2	6+2*	8+2
0+3*	2+3	4+3*	6+3*	8+3
0+4*	2+4*	4+4	6+4	8+4
0+5*	2+5	4+5*	6+5	8+5
0+6	2+6	4+6	6+6	8+6*
0+7*	2+7	4+7	6+7*	8+7*
0+8	2+8	4+8*	6+8	8+8
0+9*	2+9	4+9	6+9*	8+9
1+0*	3+0	5+0*	7+0*	9+0
1+1	3+1*	5+1*	7+1	9+1
1+2*	3+2	5+2*	7+2*	9+2*
1+3*	3+3	5+3	7+3	9+3
1+4*	3+4	5+4	7+4*	9+4*
1+5	3+5*	5+5	7+5*	9+5*
1+6*	3+6	5+6*	7+6	9+6
1+7*	3+7	5+7	7+7	9+7
1+8	3+8*	5+8*	7+8	9+8*
1+9	3+9*	5+9	7+9*	9+9

Subtraction Combinations

0−0	2−2*	4−4*	6−6	8−8*
1−0	3−2*	5−4	7−6*	9−8*
2−0	4−2	6−4	8−6*	10−8
3−0*	5−2	7−4*	9−6*	11−8
4−0*	6−2*	8−4	10−6	12−8
5−0*	7−2	9−4*	11−6	13−8
6−0	8−2	10−4	12−6	14−8*
7−0*	9−2	11−4	13−6*	15−8*
8−0	10−2	12−4*	14−6	16−8
9−0*	11−2	13−4	15−6*	17−8
1−1*	3−3	5−5*	7−7*	9−9
2−1	4−3*	6−5*	8−7	10−9
3−1*	5−3	7−5*	9−7*	11−9*
4−1*	6−3	8−5	10−7	12−9
5−1*	7−3	9−5	11−7*	13−9*
6−1	8−3*	10−5	12−7*	14−9*
7−1*	9−3	11−5*	13−7	15−9
8−1*	10−3	12−5	14−7	16−9
9−1	11−3*	13−5*	15−7	17−9*
10−1	12−3*	14−5	16−7*	18−9

difficulty in Clapp's list were selected nine, eleven, thirteen, and twelve addition combinations, respectively, and twelve, eleven, eleven, and eleven subtraction combinations, respectively, which were not taught. Of the ninety untaught combinations, forty-seven appear in the more difficult half of Clapp's list and forty-three in the less difficult half.

Periods of experiment.—In comparing the achievements of children taught by different procedures, the writer desired to equate groups which were equal not only in initial arithmetic ability but also in learning power in arithmetic. To secure a measure of the latter factor, all classes formally studying arithmetic were given similar instruction during the first five of the seventeen weeks of the experiment. In order that more careful comparisons might be made, all children who were taught arithmetic throughout the course of the experiment were taught the same fifty-five combinations in addition and the same fifty-five in subtraction during the first eleven of the seventeen weeks. During the last six weeks the children in certain classes merely reviewed these 110 combinations, while others studied the remaining 90 of the 200 addition and subtraction combinations. No generalizing procedure was carried on during the initial five weeks of the experiment. The children taught by the method of generalization were given this instruction from the sixth through the seventeenth weeks. Thus, the end of the fifth week marked the close of similar instruction for all pupils formally studying arithmetic; at this point the generalization method was begun in certain classes and continued through the seventeenth week. The end of the eleventh week marked the point of time when all groups formally studying arithmetic throughout had covered 55 combinations in addition and 55 in subtraction, or 110 combinations in all; from this point on the group studying only 110 combinations merely reviewed these number facts, whereas those who were taught all 200 combinations studied the remaining 90 number facts in addition and subtraction.

Tests administered.—Two tests were administered on the first two days of the experiment, one on the one hundred addition combinations and another on the one hundred subtraction combinations. The addition test was given on the first day and the subtraction test

on the second day. These two tests were given three times during the remainder of the experiment: first, at the close of the five weeks' period; second, at the end of the eleven weeks' period; and, third, at the close of the seventeen weeks' period. The order of administering the addition and subtraction tests was rotated from one testing period to the next. The tests on the combinations were given by the flash-card method. Large standard-size cards on which the combinations appeared were flashed at the rate of approximately ten a minute while the children wrote their answers on sheets of paper especially designed for the purpose. Each teacher practiced timing herself in flashing the combinations before administering the tests. All teachers flashed the combinations in a fixed order, which was arranged so that the untaught combinations appeared in three groups of fifteen combinations, one group toward the beginning of the test, another toward the middle, and the third toward the end of the test. When the papers were corrected, separate scores were tabulated for each child on the taught and untaught combinations. The results reported in this experiment are based entirely on the scores achieved by the pupils on these two tests at the four periods of testing. The scores represent the number of combinations known by the pupils.

Equating groups.—In order to interpret the results of the experiment, the writer at the close of the experiment equated the groups of children to be compared by pairing pupils who had similar initial arithmetic scores, pupils who had similar gains in arithmetic scores over a period of five out of seventeen weeks of arithmetic instruction, and pupils who had been taught by similar methods.

The reason for choosing growth in arithmetic ability over a period of five weeks as one of the chief bases for equating groups can be made clear by a hypothetical case. If two groups exhibit similar learning curves under similar instruction until a certain point is reached, it can be assumed that the groups are equal in the function in question. If a variation in the instruction of one group is then introduced which causes the learning curve of that group to rise abnormally, whereas the curve of the group under the unchanged technique continues to rise normally, it may be assumed that a difference in scores at any later point on the curve is attributable to the entrance of the variation in instruction. Consequently, the groups

matched in this experiment were equated so that the learning curves during the first five weeks of the experiment were similar. To secure similar learning curves, the children's scores in addition and subtraction in Test 1 were added together, and children whose scores were within a range of ten points out of a possible two hundred were paired. The two groups of pupils were also equated on the combined scores in Test 2 in a similar manner.

Since the data from the experiment were to be analyzed to learn both the extent of transfer and the effect of the teaching method, the groups of pupils were matched, first, with reference to whether they had studied 110 or 200 combinations and, second, with reference to whether they had been taught by a generalization procedure or by a method which substituted drill for the generalizing. Two hundred and ninety-six pupils who had studied only 110 combinations were paired with 296 pupils who had studied all 200 combinations. Within each of these two groups 138 pupils had been taught by the generalization method and 158 had been taught by the drill method.

Three hundred pupils who had been taught by the generalization method were paired with 300 pupils who had been taught by the drill method. Within each of these two groups 157 pupils had studied 110 combinations, and 143 pupils had studied 200 number combinations.

The six hundred pupils in the second grouping included a large number of the 592 pupils in the first grouping. In matching the two groups, the writer each time used all the records at his disposal and paired the pupils in accordance with the two items of teaching technique to be compared.

RESULTS

The purpose of the investigation was to obtain data on a twofold problem: (1) Does mastery over certain taught number combinations give mastery likewise over other untaught combinations? (2) Is a method employing a few minutes of generalization daily more or less effective in promoting transfer than a method which gives the same amount of time to drill? In the remaining part of this article data relating only to the first problem will be presented. Though the group taught by the generalization method surpassed the group

taught by the drill method, the difference in scores is not statistically significant.

The problem of the extent of transfer from taught to untaught number combinations was attacked from two angles: (1) a comparison of the scores of the children who were taught all 200 combina-

TABLE I

AVERAGE SCORES ON TAUGHT AND UNTAUGHT COMBINATIONS IN ADDITION AND SUBTRACTION ACHIEVED BY TWO MATCHED GROUPS, ONE GROUP HAVING STUDIED 110 COMBINATIONS AND THE OTHER 200 COMBINATIONS

COMBINATIONS	AVERAGE SCORE IN ADDITION		PROBABLE ERROR OF SCORES IN ADDITION		AVERAGE SCORE IN SUBTRACTION		PROBABLE ERROR OF SCORES IN SUBTRACTION		AVERAGE SCORE IN ADDITION AND SUBTRACTION COMBINED	
	110-Group	200-Group	110-Group	200-Group	110-Group	200-Group	110-Group	200-Group	110-Group	200-Group
Test 1:										
Taught	5.41	5.71	0.34	0.34	3.00	2.73	0.18	0.14	4.21	4.23
Untaught	4.92	4.97	0.31	0.29	2.49	2.37	0.14	0.13	3.71	3.67
Total	10.33	10.68	.....	.....	5.49	5.10	.....	.....	7.92	7.90
Test 2:										
Taught	22.24	21.72	0.52	0.54	13.74	14.16	0.38	0.40	17.98	17.94
Untaught	18.68	18.05	0.48	0.47	11.33	11.69	0.34	0.33	15.00	14.87
Total	40.92	39.77	.....	.....	25.07	25.85	.....	.....	32.98	32.81
Test 3:										
Taught	30.10	29.64	0.61	0.58	21.56	20.48	0.51	0.49	25.79	25.05
Untaught	24.79	24.36	0.50	0.47	16.71	16.44	0.40	0.38	20.71	20.39
Total	54.89	54.00	.....	.....	38.27	36.92	.....	.....	46.50	45.44
Test 4:										
Taught	39.57	36.92	0.57	0.55	30.14	27.79	0.62	0.57	34.93	32.36
Untaught	32.01	30.95	0.48	0.43	23.44	24.50	0.47	0.43	27.79	27.73
Total	71.58	67.87	.....	.....	53.58	52.29	.....	.....	62.72	60.09

tions with those of the children who were taught only 110 combinations and (2) a comparison of the scores of *all* children on combinations which were taught with the scores of the same children on combinations which were untaught. (It will be remembered that even in the case of the group studying 200 combinations the untaught combinations were not studied until the last six weeks.)

Table I presents the scores of the group which studied only 55 combinations in each of the two processes, or 110 combinations in all,

and those of the group which studied 100 combinations in each process, or 200 combinations in all. Scores are given for the four tests administered during the course of the experiment. Test 1 was given at the outset of the investigation, Tests 2 and 3 after intervals of five and eleven weeks, respectively, and Test 4 at the close of the experiment. "Taught" refers to the scores on the fifty-five combinations in each process which were taught to both groups during the course of time between Test 1 and Test 3. "Untaught" has reference to the forty-five combinations in each process which were not taught to the group studying 110 combinations and which were taught to the group studying 200 combinations only during the time elapsing between Test 3 and Test 4. Between Tests 3 and 4 the group studying 110 combinations merely reviewed the 110 combinations already covered. Table I is read as follows: In Test 1 on the 55 taught combinations in addition the pupils in the group which studied only 110 combinations achieved an average score of 5.41; the pupils in the group which studied 200 combinations made an average score of 5.71. The probable error of the scores of the first group was 0.34; of the second group, also 0.34. On the 45 untaught combinations the pupils in the group studying 110 combinations received an average score of 4.92, while the other group received a score of 4.97. The probable error of the scores of the first group was 0.31; that of the second group, 0.29. On the total 100 combinations in addition, the group studying 110 combinations achieved an average score of 10.33, while the group studying 200 combinations made an average score of 10.68. Since the latter scores are the exact sum of the scores on the taught and the untaught combinations and since these in turn represent average scores, no probable errors for these scores can be given. The remaining part of the table is to be interpreted in a similar manner.

The two groups represented in Table I should have exhibited little or no difference in the average scores in addition and subtraction combined on Tests 1, 2, and 3 because the two groups were equated on the basis of their total scores in addition and subtraction combined on Tests 1 and 2. This fact accounts for the similarity of their average scores on Test 1 (7.92 and 7.90) and on Test 2 (32.98 and 32.81). Since both groups were taught 110 addition and sub-

traction facts until Test 3 was given, there should have been little difference in the scores of the two groups even on Test 3. However, the average scores on this test (46.50 and 45.44) show a slight inequality in favor of the group studying 110 combinations. It was during the interim between Tests 3 and 4 that the group studying the 200 combinations took up the 90 new combinations. On Test 4 the average scores of the two groups in addition and subtraction combined were 62.72 and 60.09, respectively. The group studying 110 combinations maintained its lead. In other words, the children who studied only 110 combinations throughout knew as many number facts at the close of the experiment as those who were taught all 200 combinations.

A comparison of the two groups in addition alone or in subtraction alone reveals no striking differences other than those which have already been pointed out. In order to determine the statistical significance of the differences, the following formula[1] was applied to the differences between the comparable scores of the two groups on the four tests in addition and subtraction.

$$P.E._{M_1-M_2}=\sqrt{(P.E._{M_1})^2+(P.E._{M_2})^2}$$

It was found that none of the differences in scores is statistically significant.

Since the differentiation in the teaching of the two groups of pupils is to be found particularly in the case of the ninety combinations which were taught to one group but not to the other, it might be anticipated that the greatest disparity of scores would be found in connection with the untaught combinations. However, Table I shows that, whereas the scores of the two groups on the taught combinations differ by as much as 2.57 (in the average score on Test 4 in addition and subtraction combined), the scores on the untaught combinations differ only by 0.06. The question which naturally comes to mind is: Is this difference in the scores statistically significant, or is it merely caused by chance fluctuations? Table II throws light on this question. This table gives the percentages of the total average scores on each test represented by the scores on the

[1] Karl J. Holzinger, *Statistical Methods for Students in Education*, pp. 235–37. Boston: Ginn & Co., 1928.

taught and untaught number combinations. Table II is read as follows: The group studying 110 combinations made a total average score of 7.92 on Test 1. The score on the taught combinations was 4.21, or 53.2 per cent of the total score; the score on the untaught combinations was 3.71, or 46.8 per cent of the total score. Since the total possible score on the taught combinations is 55 and that

TABLE II

AVERAGE SCORES ON TAUGHT AND UNTAUGHT COMBINATIONS IN ADDITION AND SUBTRACTION COMBINED AND PERCENTAGE EACH IS OF TOTAL SCORES ACHIEVED BY TWO MATCHED GROUPS, ONE GROUP HAVING STUDIED 110 COMBINATIONS AND THE OTHER 200 COMBINATIONS

COMBINATIONS	110-GROUP		200-GROUP	
	Score	Percentage of Total Score	Score	Percentage of Total Score
Test 1:				
Taught	4.21	53.2	4.23	53.5
Untaught	3.71	46.8	3.67	46.5
Total	7.92	100.0	7.90	100.0
Test 2:				
Taught	17.98	54.5	17.94	54.7
Untaught	15.00	45.5	14.87	45.3
Total	32.98	100.0	32.81	100.0
Test 3:				
Taught	25.79	55.5	25.05	55.1
Untaught	20.71	44.5	20.39	44.9
Total	46.50	100.0	45.44	100.0
Test 4:				
Taught	34.93	55.7	32.36	53.9*
Untaught	27.79	44.3	27.73	46.1*
Total	62.72	100.0	60.09	100.0

* The percentages marked with an asterisk were the only ones found to be statistically significant.

on the untaught combinations 45, the percentages which might be expected by chance are 55 and 45, respectively. On Test 4 it will be seen that the percentages for the group studying 110 combinations are 55.7 and 44.3 and those for the group studying 200 combinations are 53.9 and 46.1. Is the departure from the expected normality of 55 and 45 per cent, especially in the case of the group studying 200 combinations, statistically significant or merely caused by chance factors?

An answer to the question in the last paragraph was found by use of the following formula for the probable error of observed proportions given by Holzinger.[1]

$$P.E._p = .6745\sqrt{\frac{pq}{n}}$$

When this formula was applied to the data from which the various proportions in Table II were derived and when the rule was adopted that no differences in the proportions are statistically significant if they are not at least four times the probable error, it was found that only one set of percentages—those in Test 4 for the group studying 200 combinations—differed significantly from that which could be attributed to chance factors. In other words, although the group studying 110 combinations achieved scores on the total number of combinations as large as those achieved by the group studying 200 combinations, the latter group did slightly better on the 90 combinations which had received emphasis in that group, whereas the former group did slightly better on the 110 combinations which had received extra drill in that group.

Since the percentages of taught and untaught scores in addition alone and in subtraction alone differ very little from those which have been presented for addition and subtraction combined, separate tables for the two processes will not be included.

[*To be concluded*]

[1] *Ibid.*, pp. 248–50.

A COUNTY SUPERVISORY CAMPAIGN FOR THE IMPROVEMENT OF INSTRUCTION IN READING

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Chester County, Pennsylvania, its eastern border lying but fifteen miles from the city of Philadelphia, presents some rather unusual problems with respect to supervision. The teachers under the supervision of the county superintendent and his staff number approximately 600 and are distributed over an area of 777 square miles. The schools in which they teach range in size from one-room schools (150 in number) to those of 35 rooms. The supervisory and administrative force consists of the county superintendent, two assistant superintendents, a supervisor of home economics, and a supervisor of agriculture. The actual work of field supervision, however, is largely in the hands of the assistant superintendents, and the territory of the county has been divided in half for that purpose.

Because of the necessarily infrequent contacts between teachers and supervisor it has been found that the campaign type of supervision is decidedly the most effective. The usual plan is to emphasize one major subject and one minor subject each year, the minor subject frequently having been the major of the preceding year. The county institute, which is held the week before school opens, furnishes an excellent opportunity for the teachers and supervisors to agree upon the objectives of the work for the year.

To be effective, supervision must be definite and objective and, to a certain extent, measurable. If it does not fulfil these conditions, there will be little opportunity to draw valid conclusions as to the success or failure of the work carried on. In the light of these needs, Brueckner's Judgment Test of Teaching Skill stands out as an excellent supervisory device. The author of the test says, "The test is divided into four parts, consisting of nine descriptions of lessons

taught with varying degrees of skill, and arranged in a random order. The basis of each of the four sets of descriptions is one of the four types of teachers defined by Courtis."[1]

The four types of teaching may be briefly described as follows:

Type I, the compulsion type, presents the "strict disciplinarian," who uses a formalistic type of teaching in which the pupils "give back" what is learned. Assignments are strictly in terms of the textbook, and little use is made of supplementary material. The class period, or recitation, is merely a time for testing whether the pupils have absorbed the textbook assignment. All activity is dominated by the teacher.

The teacher-preparation type, Type II, is of a slightly less formal nature. The teacher attempts to predigest the lesson. The class is under complete control of the teacher at all times. Much use is made of the "five formal steps," and considerable drill is carried on for the acquisition of knowledge and skill. More variation in answers is allowed, and discipline is somewhat more relaxed than in Type I.

In Type III, the motivation type, the efforts of the teacher are directed toward securing and holding the children's interest. More supplementary material, largely of the teacher's choice, is used, but lessons are still distinctly lessons in subject matter. The relations between teacher and pupil are on a friendly basis, and a pseudo-social situation exists. While subject matter is grouped around major topics, the problems are usually set up by the teacher.

In the purposing type, Type IV, the class work is divided into phases. Lessons are set and appraised by the pupils. The class work and disciplinary control are almost completely socialized. There is little memorization except as a means to a definite end, and questioning is seldom used. Rather is there emphasis upon achievement. The teacher is accepted as one of the group. "Child centered" describes the situation fairly well.

Under each of these four types of teaching the Brueckner test describes in random order nine lessons in geography requiring varying degrees of teaching skill. Standard ratings of large numbers of teachers and supervisors are presented. Consequently, if the lessons

[1] Leo J. Brueckner, Judgment Test of Teaching Skill. Minneapolis, Minnesota: Educational Test Bureau (University and Fifteenth Avenues, S.E.), 1929.

are used in the order suggested, a highly reliable scale is presented for each type of teaching described.

For the school year 1929–30 reading, both oral and silent, was selected as the major subject to be emphasized in the supervisory work of the year in the county. For the purpose of developing conscious standards in the mind of every teacher, the assistant superintendent at the county institute took up the project with the members of the teaching force in each district. The Brueckner test was introduced and discussed, and some practice was given in rating the geography lessons of the compulsion type. The question of developing similar standards for reading and of constructing a scale was discussed, and the group definitely decided to adopt the task as a co-operative project for the year. It was explained that, to carry out this plan, the supervisor must write up descriptions of the reading lessons observed during his visits, which would be subsequently rated by all members of the group. A preliminary evaluation of the four types of teaching was considered at the meeting, and their possible adaptation to the reading project was briefly outlined.

The specific objectives set up were (1) to raise the general level of teaching efficiency in the subject of reading, both oral and silent, by use of the Brueckner test, by (*a*) setting up general standards of methodology acceptable to the group and (*b*) setting up specific standards of skill in the field of oral and silent reading, (2) to construct a scale for the teaching of reading similar to that resulting from the Brueckner test when the lessons in geography there presented are arranged according to the degree of teaching skill required. Of course, it was understood that in one year only a beginning could be made toward the attainment of these objectives.

One of the most important phases of supervision in the county is a series of teachers' meetings which each assistant superintendent conducts among his teachers who are not under the close direction of a supervising principal. These meetings are attended by twenty to thirty teachers from adjoining districts. An entire afternoon (usually Friday) is given to a meeting, and the program is announced several weeks in advance. These programs are entirely of a professional nature, and the activities are planned to contribute toward the attainment of the supervisory objectives. All the reading lessons

observed by the writer during his early supervisory visits were described as impersonally and as accurately as possible, and the descriptions were mimeographed in sufficient quantities for distribution to all teachers at the early meetings.

In the meantime a sufficient number of copies of the Brueckner test were purchased to supply each teacher with a copy. At the first teachers' meetings the descriptions of method were gone over carefully by the groups, and each of the geography lessons in the test was ranked by each teacher. A special attempt was made to make the terminology of the four methods part of the vocabulary of each teacher so that the discussions during the supervisory visits and at subsequent meetings could proceed on common grounds. The descriptions of the reading lessons observed were distributed, and each teacher was asked to rate each lesson, first, according to the methodology of the Brueckner test and, second, according to skill. The nine-point scale used in rating teaching skill is shown in Table I. About

TABLE I

SCALE USED FOR RATING TEACHING SKILL

Rating	Numbers Assigned
Excellent	1
Good	2, 3
Medium	4, 5, 6
Poor	7, 8
Failure	9

ten lessons were presented at the first meeting, care being taken that none taught by any of the group present was submitted to that group. At this meeting only the majority ratings were recorded, but at subsequent meetings individual blanks were used for the purpose. The lessons presented were so arranged in the mimeographed descriptions that, for purposes of contrast, good and excellent lessons appeared interspersed with the poor ones.

During the supervisory visits the teachers were anxious to discuss their reading lessons in light of the objectives for the year, and there seemed to be a very sincere attempt to raise the teaching level. However, until the ratings of the earlier lessons were made available, a lack of standards was clearly evident.

Most of the lessons observed during the early visits of the super-

visor were of the compulsion type, and many of them evidenced poor teaching skill. Here and there, however, the work of a teacher with vision stood out far above that of the others. Most of the lessons presented in the first group were rated by the teachers as poor lessons of the compulsion type. The following descriptions of lessons are examples of the contrasting types presented.

Lesson 1. A Reading Lesson in Grade III

The children stood in a straight line across the platform and were frequently reminded to keep the line straight. Questions on the content of a poem read the day before had been studied. A few pupils knew the answers when the testing was carried out by the teacher.

The reading of the lesson for the day was then gone through with, each child reading the complete assignment. The children were told to raise their hands when the reader was unable to pronounce a word.

The reading was, in general, halting, and little interest was shown. Many of the children pointed, and no child faced the class as he read. At the end of the period a few questions printed in the textbook were asked on the content of the material read. In making the assignment, the teacher said, "Take pages 84, 85, and 86. Write pages 85 and 86. Class excused."

Lesson 2. A Reading Lesson in Grade III

The class came to the front of the room for the lesson, which was on "The Tin Soldier" as given in a well-known reader. There was no discussion before the reading nor any attempt to motivate the work.

One pupil reported, "The page is not in my book." The remark was passed over, and no remedy was suggested.

The first child stood up, faced the class, and read, pointing to the words as he did so. The class followed in their books and at the slightest hesitation prompted in pronunciation. The process was repeated by the second pupil, the teacher also prompting in many cases. Throughout, the reading was mechanical and done with little expression. There was much finger-pointing by all pupils.

At the conclusion of the period the teacher asked a few questions on the content, such as "What is tinsel?" "What is a jack-in-the-box?"

The assignment was as follows: "Next time start at page 53 and read to page 55."

Lesson 6. A Reading Lesson in Grade VI

The class was in a room of about forty children, of whom eighteen formed the sixth grade.

Each child had been reading books of his own selection from the room library. An inspection of the reading chart in the rear of the room showed that until January 1 the pupils had read an average of six books each.

From the book which he was reading each child had selected some portion, such as a page or two or an interesting incident or description, which he desired to read to the class. This selection had received the approval of the teacher, usually on the preceding day, and had been prepared as an oral reading lesson.

When a child was called upon, he came to the front of the room, faced the class, and in a few sentences gave a setting for the material which he was about to read. This introduction served in most cases to arouse the interest of the pupils, who always closed their books and listened attentively.

Having given the setting, practically every pupil read unusually well, while a number of pupils read almost dramatically.

Good reading, during which the eyes were frequently lifted from the book, produced an unusual audience situation, which almost demanded applause.

There was practically no hesitation or mispronunciation on the part of any of the readers. They had something which they wanted to present and which they had prepared, and the class was given something worth listening to.

Almost half the pupils read during the period, the remainder being reminded that they would have their chance at the next meeting.

The comparative rating of these lessons and others of the same types left some very obvious impressions as to the nature of good audience reading and led to a stimulating discussion of aims, methods, and materials.

To widen the scope of the work, the assistant superintendent enlisted the aid of the supervising principals of the county. These men, about fifteen in number, meet monthly in the office of the county superintendent. The writer outlined the work to them early in the year, secured ratings from some of them on the same lessons presented in the teachers' meetings, and urged them to co-operate in the project by sending in descriptions of reading lessons observed in their own districts. These principals, in general, co-operated splendidly and made worth-while contributions by supplying descriptions of different types of reading. They were kept familiar with the work by being given reports of progress and a final summary of the year's activities.

Other descriptions of lessons observed by the assistant superintendent were presented at the teachers' meetings until a total of more than twenty-five had been rated and classified. While many more lessons could have been included in the study, it was felt that there was no particular value in presenting a large number of lessons of the compulsion type, such as were observed early in the year. The

final ratings given twenty-five lessons by the teachers are shown in Table II.

The data in this table reveal several significant facts.

1. The critical judgments of the teachers themselves gave low ratings on skill to the lessons of the compulsion type which were observed early in the year.

TABLE II

NUMBER OF TEACHERS GIVING VARIOUS RATINGS AS TO TYPE OF TEACHING AND DEGREE OF SKILL IN TWENTY-FIVE READING LESSONS

LESSON	RATING OF TYPE				RATING OF SKILL									
	Compulsion	Teacher-Preparation	Motivation	Purposing	1	2	3	4	5	6	7	8	9	Median
1....	47	.....	.....	.....	...	...	...	...	...	...	18	28	15	8.4
2....	49	.....	.....	1	...	1	...	...	...	...	29	19	1	7.8
3....	1	.....	4	27	9	11	7	1	3	...	1	...	1	2.7
4....	81	.....	.....	.....	...	...	...	...	27	...	5	29	20	8.3
5....	.....	36	.....	1	...	...	11	...	21	...	...	...	...	5.2
6....	1	.....	18	110	51	27	34	18	...	...	...	...	...	2.5
7....	1	49	.....	.....	...	...	48	...	2	...	...	...	...	3.5
8....	6	46	22	.....	...	36	33	...	2	3	...	...	...	3.3
9....	96	1	.....	.....	...	...	...	1	1	...	53	42	...	7.9
10....	18	41	28	4	2	14	17	27	15	6	8	...	1	4.4
11....	8	16	42	24	6	17	25	14	14	9	2	2	...	2.9
12....	74	9	5	3	3	8	11	12	20	14	20	2	2	5.6
13....	2	8	20	60	5	23	22	16	12	5	4	1	...	2.7
14....	69	10	8	1	17	25	11	13	7	7	4	2	1	3.1
15....	20	21	32	10	10	32	18	9	11	8	2	...	...	3.2
16....	31	27	22	11	5	21	20	19	10	7	6	...	...	3.9
17....	3	11	42	20	9	29	21	8	2	3	...	1	...	2.9
18....	84	1	.....	.....	...	...	...	...	...	...	...	21	64	9.3
19....	4	31	4	.....	...	...	14	15	19	...	8	...	...	4.9
20....	7	4	3	1	1	4	3	5	1	...	1	...	...	3.8
21....	7	2	5	.....	1	4	2	...	1	...	1	...	...	2.9
22....	1	7	30	28	6	13	17	17	7	2	1	...	...	3.7
23....	24	7	2	11	3	5	11	8	7	3	2	...	1	4.1
24....	5	5	12	6	5	9	10	1	...	...	...	...	...	2.8
25....	7	3	4	1	1	1	6	3	3	...	1	...	...	3.9

2. There was a definite need for a clearer recognition on the part of the teachers of what constitutes a good or a poor lesson in reading. The ratings on skill for Lesson 10, for instance, show a wide spread of judgment: two persons rated the lesson excellent; fourteen, good and almost excellent; eight, poor; and one, failure. Several other lessons, notably Lessons 12 and 14, also illustrate this need.

3. A number of the lessons were difficult to classify as to type, as in the case of Lessons 15 and 16.

4. It was also demonstrated that, in rating most lessons as to type, teachers must exercise careful discrimination. Lesson 3, for example, was clearly a purposing type until the assignment was reached. Then the partial domination of the teacher became evident and made the classification of the lesson questionable. Early in the year it was necessary to call such facts to the attention of the teachers, but the power of discrimination grew as the rating progressed.

5. The lessons observed during the latter part of the year were rated much higher in skill than those observed earlier in the year.

Interesting as are the results of the rating, certain other results of the project are of greater significance. A strong tendency developed toward the use of material of the kind mentioned in the description of Lesson 6, which showed that the children were reading different books for the purpose of securing a desirable audience situation. Many teachers asked for suggestions about available material. Others used magazines, books from circulating libraries, the *Weekly Reader*, newspapers, and the like. Because of the recognition of the contributions to skilled reading performance which are to be secured from a variety of materials, the tendency on the part of teachers of the county to recommend for purchase sets of books of the same kind diminished greatly.

Teachers became conscious of the bad features of some of the earlier lessons described. For five or six months the writer did not see a child read orally without facing the class; neither did he during that time observe an assignment such as is described in Lesson 1, in which the children were told to "take" certain pages and to "write" others. This result came about largely because recognized standards of assignment were set up.

Never had so many teachers asked the writer where they might visit in order to see good reading taught. Many went to see the teacher of Lesson 6 and came back to their own classrooms and attempted to put into practice there the best things observed.

The teachers were more than willing to co-operate in the project and in most cases were anxious to have their lessons written up and

to learn what other teachers thought of them. In one of the letters which the writer sent to all his teachers during the year it was suggested that, if any teachers wished to have their reading lessons written up and evaluated by the groups, every effort would be made to do so. It was also suggested that those who preferred to "stand off" from their own work and to write up a lesson as impersonally as possible would find this procedure of considerable value. Such descriptions were also rated by the groups and a report made to the teachers. While there may be objections to this method of procedure, it was felt that it is decidedly worth while for a teacher to examine her work critically by making a written record. This procedure is an excellent method of self-evaluation, which is one important contribution made by the Brueckner test.

In the carrying-out of this supervisory project there was a constant attempt to impress on each teacher the necessity of having a definite and justifiable purpose for each teaching procedure adopted and the necessity of using all the devices and means possible for the consummation of the aim. The critical evaluation of a particular reading lesson both by a teacher herself and by her associates seems to have assisted in the growth of this sense of professional judgment.

If the growth of teachers in service is to be accepted as a valid supervisory objective, the type of activity suggested in this article should be worth while. Applied to the field of reading it supplies a means of setting up desirable standards and models. It makes it possible to show the poor or weak teacher the procedure which the good teacher is using and the results secured. The evaluations are the more valuable because they are made by the teachers themselves. If the plan is used as a rating scheme by supervisors, the results will furnish a continuing record of the teachers' growth in method.

It would be extremely foolish to try to raise the teaching level from the compulsion to the purposing type hurriedly. Progress must be made at a reasonable rate of speed with the ultimate goal in mind. In fact, there are some teachers who probably should never attempt the purposing type of teaching. Only a few good purposing lessons were developed during the year; yet these resulted in progress along a path that leads through "teacher-preparation" and "motivation."

LIABILITY OF SCHOOL AUTHORITIES FOR THE ENFORCEMENT OF RULES CHARACTERIZED AS UNREASONABLE BY COURTS

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Numerous cases have arisen concerning the liability of school authorities for the enforcement of rules governing the conduct of pupils. Both pupils and parents have sought to hold trustees, superintendents, and teachers liable for different types of alleged injuries. The belief is not uncommon that teachers and trustees are liable civilly or criminally for the enforcement of unreasonable rules under which pupils have been punished or suspended from school. In order to throw some light on the question of the liability of school authorities for enforcing rules characterized as unreasonable by the courts, the writer has canvassed decisions on this point. It is felt that a sufficient number of decisions have been studied to permit certain conclusions to be drawn as to the case law on the question.

GENERAL RULE OF NON-LIABILITY OF OFFICIALS FOR MISTAKES IN JUDGMENT

The great weight of authority holds that officers or persons who are called upon to exercise discretion in a quasi-judicial capacity are not liable for mistakes in judgment. Courts have almost universally held that wilful and malicious intent is necessary before an officer can be held liable for his official acts when a mistake has been made.

One of the first cases on this point was the English case of *Harman* v. *Tappenden and Fifteen Others*,[1] which was decided in 1801. The court pointed out that this case was one of the first of its kind but that it would be wrong to hold an officer liable for a mistake in judgment unless he acted with malice. The rule laid down in the English case has been cited by many American courts. In an early New York case[2] the court said, "It would, in our opinion, be opposed to all the

[1] *Harman* v. *Tappenden and Fifteen Others*, 1 East (K.B.) 555.

[2] *Jenkins and Others* v. *Waldron*, 11 Johns. (N.Y.) 114.

principles of law, justice and sound policy, to hold that officers, called upon to exercise their deliberative judgments, are answerable for a mistake in law, either civilly or criminally, when their motives are pure, and untainted with fraud or malice."

This rule was first applied in the case of judicial officers, but it has since been extended to those acting in a quasi-judicial capacity. An Indiana case[1] sets out clearly the rule of non-liability of officers and those called upon to exercise discretion in a quasi-judicial capacity. In applying this rule to school trustees, the court said:

> It is a wise and salutary rule that there can be no action maintained against this class of officers where they acted without malice. An honest mistake in judgment, either as to their duties under the law or as to the facts submitted to them, ought not to subject such officers to a suit of damages. They may judge wrongly, and so may a judicial tribunal, but the party injured can have no cause of action when they act in good faith, and in the line of what they believe is honestly their duty. . . . . It would be a harsh rule that would subject such officers to a suit for damages for every mistake they may make in the good-faith discharge of their official duties. In order to charge a liability, it must be averred and proved that such action was taken either wantonly or maliciously; that is, from wilful and wicked or corrupt motives.

Numerous other cases could be cited to show the non-liability of officers when called upon to act in a quasi-judicial capacity, but these are sufficient. The rule is based on principles of public policy because it would be very difficult to induce persons to hold non-remunerative offices, or any other offices, if they knew they would be held liable for mistakes in judgment honestly made.

CASES WHICH HOLD THAT SCHOOL AUTHORITIES ARE NOT LIABLE FOR ENFORCING UNREASONABLE RULES

The rule given in the preceding section has been applied in most instances where it has been alleged that school authorities have acted unwisely and wrongfully in making and enforcing rules. However, there are a few cases in which the opposite view has been taken; reference to these cases will be made in another section of this article.

There are a number of cases concerning the reasonableness of corporal punishment, but that point will not be discussed in this article.

[1] *Branaman* v. *Hinkle et al.*, 139 Ind. 47, 37 N.E. 546. For similar statements of the rule see *Elmore* v. *Overton*, 104 Ind. 548, 54 Am. Rep. 343; *Donahoe* v. *Richards*, 38 Me. 379, 61 Am. Dec. 256; and *Churchill* v. *Fewkes*, 13 Ill. App. 520.

One would expect to find a great may cases dealing with the point in question, but courts have apparently been called upon more often to settle questions concerning reasonable punishment and the reasonableness of rules than to determine the question of tort liability when unreasonable rules have been enforced. There are not many cases directly in point, but the rule of non-liability of school authorities for mistakes in judgment has been adopted by the courts in a few instances.

In the case of *Dritt* v. *Snodgrass*[1] a pupil was excluded from school for breaking a rule which made a pupil subject to expulsion for attending parties while school was in session. The pupil attended a party with his parents' consent. The teacher and the directors of the school were sued for damages on the ground that the exclusion was wrongful because of the unreasonableness of the rule. In deciding the case in favor of the defendants, the court said:

> School directors are elected by the people, receive no compensation for their services, are not always, or frequently, men who are thoroughly informed as to the best modes of conducting schools. They are authorized, and it is their duty to adopt reasonable rules for the government and management of the school, and it would deter responsible and suitable men from accepting the position, if held liable for damages to a pupil expelled under a rule adopted by them, under the impression that the welfare of the school demanded it, if the courts should deem it improper. They are to determine what rules are proper, and who shall say that the rule adopted in this case was harsh and oppressive? I might think it was; wiser men would maintain that it was proper and right, that pupils attending social parties are liable to have their minds drawn off from their studies, and thus to be retarded in their progress; but whether the rule was a wise one or not, the directors and teachers are not liable to an action for damages for enforcing it—even to the expulsion of a pupil who violates it. While this court might, on mandamus to compel the board and teacher to admit a pupil thus expelled, review the action of the board, and pass upon the reasonableness of the rule, which we do not, however, decide here, yet the doctrine that the courts could do this is very different from that which would hold the directors liable in an action for damages for enforcing a rule honestly adopted for the maintenance of discipline in the school.

It will be noted that the reasoning of the court in this case is very similar to that in the cases cited in the preceding section.

There is another important point in this case. It should be re-

[1] *Dritt* v. *Snodgrass*, 66 Mo. 286, 27 Am. Rep. 343.

called that the teacher and the directors were sued jointly. The court applied to the teacher the same rule that was applied to the directors. Thus, it can be concluded that the position of teacher, in the reasoning of this court, is such that a teacher is not liable for errors in judgment to any greater extent than are directors.

In the Illinois case of *McCormick* v. *Burt*,[1] decided in 1880, the teacher and directors were sued for damages for suspending a pupil because he violated a rule requiring that all books be put aside during the reading of the Bible as an opening exercise in the morning. No pupil was required to attend the exercise. The Illinois Supreme Court said:

> In such cases the law seems to be well settled that there can be no action maintained against school officers where they act without malice.
>
> The rule is certainly a reasonable one. A mere mistake in judgment, either as to their duties under the law or as to facts submitted to them, ought not to subject such officers to an action. They may judge wrongly, and so may a court or other tribunal, but the party complaining can have no action when such officers act in good faith and in the line of what they think is honestly their duty. Any other rule might work great hardship to honest men, who, with the best of motives, have faithfully endeavored to perform the duties of these inferior offices. Although of the utmost importance to the public, no considerable emoluments are attached to these minor offices, and the duties are usually performed by persons sincerely desiring to do good for their neighbors, without any expectation of personal gains, and it would be a very harsh rule that would subject such officers to an action for damages for every mistake they may make in the honest and faithful discharge of their official duties as they understand them. It is not enough to aver the action of such officers was erroneous, but it must be averred and proved that such action was taken in bad faith, either wantonly or maliciously. If in the discharge of their official duties, such officers simply err, it is what other tribunals invested with discretionary powers are liable to do.

Here, again, no distinction was made between the liability of the teacher and that of the directors so far as responsibility for the exercise of discretion was concerned. The same is true in the case of *Churchill* v. *Fewkes*,[2] decided in 1883. In that case a pupil had been suspended under a rule which required a written excuse after a certain amount of absence. The pupil's parents refused to send a note. In this case the teacher, principal, and directors were made parties to the suit. The court said:

[1] *McCormick* v. *Burt*, 95 Ill. 263, 35 Am. Rep. 163.

[2] *Churchill* v. *Fewkes*, 13 Ill. App. 520.

It does not seem necessary to multiply authorities on the subject. If appellants were acting in good faith, however much they may have been mistaken as to their power under the law, this action cannot be maintained against them, and as I have said it is very clear that the directors were acting in good faith in making the rule in question. They could have had but one object and that was that the school should be conducted in such a way as would be most beneficial to the people of the district.

Another rather important case is that of *Fertich* v. *Michener*.[1] In an action for damages against the superintendent of schools there were two major counts in the plaintiff's petition. First, the pupil claimed damages because of an alleged wrongful enforcement of a rule which required that classroom doors be locked during the opening exercises in the morning. On a very cold morning the pupil, a child of about ten years of age, came to school and found the doors locked. Pupils had been instructed that, if they were late, they should wait in the hall or in the principal's office until the doors were opened at nine o'clock. The child waited in the hall for a few minutes and then went home. Her feet were frozen. The lower court allowed the plaintiff to recover damages. In passing on this point, the higher court said:

A school regulation must therefore be not only reasonable in itself, but its enforcement must also be reasonable in the light of existing circumstances. The habit of locking the doors of schoolrooms during the opening exercises observed by the appellee's teacher was not an unreasonable enforcement of the rule under consideration, in moderate weather and under ordinary circumstances.

But to lock the doors on an extremely and unusually cold morning, without causing special care and attention to be given to the comfort of such pupils as might thereby be required to remain in some other part of the building, was undoubtedly both an unreasonable and a negligent and hence an improper enforcement of the rule.

It will be observed that the court pointed out that this rule was probably unreasonably enforced; yet the judgment of the lower court allowing the plaintiff damages was reversed.

The second count in this case charged false imprisonment because the pupil had been kept after school to make up time lost in leaving the room. The court said:

However mistaken a teacher may be as to the justice or propriety of imposing such a penalty at any particular time, it has none of the elements of false im-

[1] *Fertich* v. *Michener*, 111 Ind. 472, 11 N.E. 605, 60 Am. Rep. 709.

prisonment about it, unless imposed from wanton, wilful or malicious motives. In the absence of such motives, such a mistake amounts only to an error of judgment in an attempt to enforce discipline in the school, for which, as has been stated, an action will not lie. And in this connection it is perhaps proper to say that there is nothing in the evidence, as we construe it, tending to show that the appellee's teacher was actuated by wantonness, wilfulness or malice in any of the alleged wrongs of which the appellee has complained.

From the reasoning in the cases cited it may be concluded that teachers and other school authorities are not liable for enforcing rules which may be termed unreasonable when they have acted without malice and have merely made a mistake in judgment in acting in their quasi-judicial or discretionary capacity.

CASES WHICH HOLD THAT SCHOOL AUTHORITIES ARE LIABLE FOR ENFORCING UNREASONABLE RULES

The Indiana case of *State* v. *Vanderbilt*[1] is the only case found by the writer in which the court took a position opposite to that taken in the cases discussed in the preceding section. In this case a pupil was punished for failure to pay for a window glass in accordance with a rule which required pupils to pay for wanton and careless destruction of school property. In holding the teacher liable, the court said:

> We think that a rule requiring pupils to pay for school property which they may wantonly and carelessly break or destroy is not a reasonable rule, and therefore that teachers have no right to make and enforce such a rule by chastisement of the pupils. The "wanton and careless destruction," etc., amounts to nothing more than carelessness. . . . .
>
> Carelessness on the part of children is one of the most common, and yet one of the least blameworthy, of their faults. In simple carelessness there is no purpose to do wrong. To punish a child for carelessness in any case is to punish it where it has no purpose or intent to do wrong or violate rules.
>
> But beyond this, no rule is reasonable which requires of the pupils what they cannot do. The vast majority of pupils, whether small or large, have no money at their command with which to pay for school property which they injure or destroy by carelessness or otherwise. If required to pay for such property, they would have to look to their parents or guardians for the money. If the parent or guardian should not have the money, or if they should refuse to give it to the child, the child would be left subject to punishment for not having done what it had no power to do.

There are a number of other cases which have been interpreted as supporting the rule that teachers are liable for the enforcement of

[1] *State* v. *Vanderbilt*, 116 Ind. 11, 9 Am. St. Rep. 820.

unreasonable rules. However, these cases appear to turn on points other than the reasonableness of the rules and should therefore be cited with certain restrictions or limitations.

In the Illinois case of *Rulison et al.* v. *Post*,[1] decided before the cases of *McCormick* v. *Burt*,[2] and *Churchill* v. *Fewkes*,[3] the principal of the school and the directors were held liable for forcibly removing the plaintiff from school because she refused to procure books for a bookkeeping class. Her parents had told the principal that the girl should not be required to take the bookkeeping course. The girl was twice led from the building by the arm. The district was given the power by statute to offer other and higher courses than those enumerated in the act. Furthermore, the statute said that pupils could be removed from school only for disobedient, refractory, or incorrigibly bad conduct. The court pointed out that exclusion of a pupil from school was for the purpose of preserving order and not for the purpose of punishment. The case turned on the point whether the directors could require that pupils take the higher courses offered. It was pointed out that the statute could not have been passed for the purpose of creating high schools because such schools had been created by special acts. Therefore, the higher courses were discretionary, and pupils could not be compelled to take them. The court said:

> . . . . it follows that the directors had no power to expel appellee from the school and its privileges and benefits, because she, under the direction of her parents, refused to study bookkeeping, as it is not one of the branches enumerated in the statute, and is one her parents had the option to have taught her, as the directors had provided that it should be taught in the school; and the directors having no such power, they could not lawfully expel appellee from the benefits and privileges of the school, for a refusal to comply with this requirement, and when they did so with force, it constituted a trespass.

The fact that in this case the court plainly said that the act of the defendants was unlawful takes the case out of the category of cases in which an honest mistake in judgment was made. The provisions of the statute requiring that certain courses be taught charged the defendants with notice that they could not arbitrarily deprive pupils

[1] *Rulison et al.* v. *Post.* 79 Ill. 567.

[2] *McCormick* v. *Burt*, 95 Ill. 263, 35 Am. Rep. 163.

[3] *Churchill* v. *Fewkes*, 13 Ill. App. 520.

of the benefits of such courses simply because the pupils refused to study higher branches not enumerated in the law.

The Alabama case of *Williams* v. *Smith*[1] is similar to the case just cited. In this case, although the statute provided that the schools should be free, the teacher suspended a pupil because she or her parents refused to pay $1.00 a month, which was to be largely used in supplementing the teacher's salary. The court pointed out that the teacher and the trustees should be held liable for the commission of an act which upon its face was unlawful and tortious. However, the court said, "In the matters of discipline, teachers and masters of schools exercise a discretion for which, in the absence of abuse, they cannot be held to answer."

The case of *Morrow* v. *Wood*[2] has often been referred to, but it does not appear to be exactly in point. The father of a pupil did not wish his child to study geography. When the pupil refused to study the subject in school, the teacher whipped the child. The teacher was sued for assault and battery, but the action was discontinued on the defendant's motion in the lower court. The teacher then sued the father for malicious prosecution. Her action was denied in the lower court, and she appealed. The higher court refused to pass upon the question of whether an action for malicious prosecution would lie after a charge of assault and battery had been discontinued on the defendant's motion and held that the teacher had had no right to whip the pupil. On this ground the teacher was not allowed to recover on the charge of malicious prosecution, but there is nothing in the case to show that she was forced to pay damages for assault and battery.

There appear to be certain limitations in this last group of cases which should cause one to hestitate before citing them as giving support to the contention that a teacher will be held liable for the enforcement of an unreasonable rule.

In conclusion, it seems safe to say that the weight of authority clearly holds that school authorities, including teachers, are not liable for the enforcement of unreasonable rules when they have acted in good faith and have merely erred in their discretionary or quasi-judicial capacity.

[1] *Williams* v. *Smith*, 192 Ala. 428, 68 So. 323. [2] *Morrow* v. *Wood*, 35 Wis. 59.

Educational Writings

REVIEWS AND BOOK NOTES

A textbook in elementary-school measurement.—The books which have appeared in the field of educational testing during the last ten years attest the recognition which this decade accords to the movement. The subject can now claim approximately a "five-foot bookshelf" of its own. In the main, however, these books represent a variety of treatments rather than a cumulation of information. Some volumes among them represent outstanding additions to our knowledge, and every such volume is followed by a number that merely present this knowledge in different ways or treat different portions of it. It seems reasonable to say at this time that all the important elements of our understanding of tests are already to be found recorded in these books and that further publications must either make new contributions or base their claims on a more satisfactory organization and presentation of the known material.

A late book[1] in this field rests its case on the latter ground. It treats the whole field of educational measurement in the elementary grades and (the editor of the series says) "fills a long-existing gap" in the particular series of which this book is a part. Lewis M. Terman, the editor, further says:

> Of the half-dozen or more manuscripts which have been submitted to this series as strictly introductory texts in educational measurement, this by Dr. Madsen is the first that the Editor has been willing to recommend for publication. The author himself would be the last to claim that this book is free from faults, but it can fairly be said that it provides an excellent orientation to the student who is entering upon the subject for the first time. In the opinion of the Editor, Dr. Madsen's book gives about all the information on this subject that can reasonably be regarded as essential for the rank and file of teachers to have [p. ix].

The book is designed for undergraduate teachers-in-training or for teachers in service. The topics treated and the approximate amount of space given each are as follows: individual differences and their objective measurements, thirty-five pages; statistical methods (in which the author discusses both the nature and the calculation of five measures), fifty pages; intelligence and its measurement by individual tests and by group tests, fifty pages; achievement tests in the elementary-school subjects, seventy-five pages; the meaning and use of test results, sixty pages; suggestions for improving teachers' informal examinations,

[1] I. N. Madsen, *Educational Measurement in the Elementary Grades*. Yonkers-on-Hudson, New York: World Book Co., 1930. Pp. x+294. $2.00.

twenty pages. It may be said that 17 per cent of the book is given to statistical method, 17 per cent to intelligence testing, 26 per cent to achievement testing, and 40 per cent to orientation and application. To the reviewer this division would appear to be a reasonable and desirable division of emphasis.

The four chapters dealing with intelligence and achievement tests are given largely to a discussion of illustrative tests. The tests mentioned are not necessarily recommended as the most desirable tests. While opinion will naturally vary as to the tests that should be used for illustrative purposes, the instructor can always introduce his own choice to illustrate the classroom discussion. It would seem, however, that the extensive treatment given to the New Stanford Achievement Test throughout chapters vii and viii and the omission of reference to any other achievement battery are open to some criticism. Lists of selected tests are given at the ends of these chapters.

The reviewer would regard the work as well done. While he has not noted anything new in the book, that fact is not a criterion. The author has chosen essential topics and has treated them with considerable evenness. He is to be commended on keeping down the total number of pages—a rather difficult undertaking for a book so broad in scope. The educational uses of the test result seem reasonably well provided for. References and exercises are given at the ends of chapters, and the mechanics of the book are good. It has probably qualified for its place.

DOUGLAS E. SCATES

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A method of measuring problem tendencies in children.—A recent monograph[1] describes the construction and validation of a rating scale designed to detect and measure those tendencies in behavior which are likely to bring the child into conflict with his social environment. The scale consists of thirty-five items, classified as intellectual, physical, social, and emotional. The significance of the various ratings on each item was determined by finding the scores made by the children receiving these ratings on a behavior record. This behavior record was based on the observation of overt behavior. The various ratings were thus given weights from one to five. The total score is the sum of the weights on the individual items. The scale was found to have an average reliability expressed by a correlation of about .90, and evidence is presented to indicate that the score agrees in fair degree with other indications of behavior.

FRANK N. FREEMAN

Extra-teaching duties of teachers.—Studies of the duties performed by teachers show that many of their responsibilities are extra-instructional in character.

[1] Willard C. Olson, *Problem Tendencies in Children: A Method for Their Measurement and Description*. Minneapolis, Minnesota: University of Minnesota Press, 1930. Pp. xii+92. $2.00.

Some of the extra-instructional duties influence directly the learning of the pupils and the success or failure of the teacher as an instructor; others, while influencing classroom work only indirectly, may yet determine to a great extent the standing of the teacher in the school community. Often teachers secure only incidental training in the performance of many of the extra-instructional duties, and as a result they may subsequently either neglect or perform incompetently duties which exercise an important influence on their professional success. The recognition of the importance to the teacher of knowing how to perform efficiently the numerous non-instructional, as well as the instructional, duties prompted the author to produce the volume under review.[1]

The book presents about the same treatment that is usually given in textbooks dealing with class management. However, the author has undertaken to generalize with regard to the extra-instructional duties of teachers at all levels of public-school teaching, a task which is not only extremely difficult but which will be regarded by many as impossible of accomplishment. He discusses the activities of teachers—such as establishing helpful classroom routine, maintaining good discipline, administering attendance, improving the holding power of the school, reducing delinquency, organizing and administering extra-curriculum activities, co-operating with auxiliary educational agencies, keeping adequate school records, maintaining helpful relations with parents, keeping up to date professionally, co-operating with fellow-teachers—and a miscellaneous group of personal problems of teachers. While the author does not claim completeness of treatment for the field of duties considered, one wonders why he did not draw on the master list of duties prepared by W. W. Charters and Douglas Waples in *The Commonwealth Teacher-Training Study* (Chicago: University of Chicago Press, 1929), at least as a means of insuring a measure of completeness of treatment.

The volume can scarcely be classified as a contribution to the literature of teacher-training, although it contains some valuable material for both experienced and inexperienced teachers. The interpretations of the extra-instructional duties considered reveal a wholesome theory of school management on the part of the author. Many efficient practices are listed. The critical reader, however, will be impressed not only with the incompleteness of the treatment of the field of duties which the author has undertaken to treat but also with many infelicities in writing which should have received critical editorial treatment before the material was offered for print. Because of the wealth of published material dealing with class and school management extant there appears to be no justification for a hasty, incomplete treatment of an important field which offers unusual opportunities for comprehensive treatment.

W. C. REAVIS

[1] Roscoe Pulliam, *Extra-Instructional Activities of the Teacher*. Garden City, New York: Doubleday, Doran & Co., Inc., 1930. Pp. vi+460.

An elementary textbook in statistics.—Several difficulties are encountered in preparing a textbook to be used in courses in statistics for students of education. Since statistics is a form of applied mathematics, it makes use of some basic techniques which are developed only in higher mathematics. On the other hand, most of the students in education who take statistical courses have had little training beyond high-school algebra. To teach these students to apply statistical methods wisely in educational investigations is a difficult, if not a well-nigh impossible, task. Nevertheless, a recent textbook[1] has been prepared for such students.

This book is very simply written and makes use of a wealth of concrete illustrations. A most notable characteristic is the introduction of each statistical measure by presenting the necessity for such a measure in typical educational investigations. To a large degree, the authors develop methods of computation from the standpoint of the common sense of the procedures rather than by logical proof. Unfortunately, there is a failure to emphasize sufficiently the conditions necessary to apply various formulas. For example, the following formula for the standard error of the difference between two means is given on page 139, but no explanation is made that this formula is applicable only when the two series from which the means are computed are uncorrelated.

$$\epsilon_D = \sqrt{(\epsilon_{M1})^2 + (\epsilon_{M2})^2}$$

Similarly, no attempt is made to indicate that the correlation coefficient measures only the linear relationship between two variables.

The book includes the usual topics considered in an elementary course for students, namely, tabulation of data, measures of central tendency, measures of variability, and correlation. In addition, there is a brief treatment of the normal curve and of the meaning of reliability. No one can read the book without being astonished at the effectiveness of the simple, concrete approach which the authors have used. Instructors using the book will find it necessary to supplement it by additional readings and discussions in order to develop the mathematical assumptions which underlie common statistical measures. Such understanding is essential for the wise use of statistical methods in attacking educational problems.

R. W. TYLER

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New reading books for primary-grade children.—Among the large number of attractive books for the supplementary-reading table of the primary grades the "Happy Childhood Readers"[2] have a valuable place.

The material of the books is varied and includes stories of child life and ac-

[1] Ernest W. Tiegs and Claude C. Crawford, *Statistics for Teachers.* Boston: Houghton Mifflin Co., 1930. Pp. xvi+212. $1.90.

[2] *a*) Albert C. Lisson and Evelyn V. Thonet, in collaboration with Emma Grant Meader, The Happy Childhood Readers: *Betty and Jack* (A Primer), pp. 152; *Helen and*

tivities, nature, health, safety, children of other lands, and several of the old folk and fairy tales. One welcomes the return of some of the favorite classic fairy and folk stories, which have been omitted from most of the recent reading books for primary-grade children. Each book in the series follows the life of two characters throughout the book and contains interesting stories of their work, play, thoughts, and dreams. The dreams provide for the introduction of animal stories; this presentation eliminates the objection of many people to animal stories in which the animals talk and act as human beings.

Appropriate poems which are to be read by the teacher are included in each book. The implication that these poems are not to be read by the children may save the young, inexperienced teacher from using the poems for oral-reading lessons before the children have sufficient skill in oral reading to contribute to the growth of appreciation of poetry among the listeners in the group. Some children's poems contained in the books may be used to stimulate pupils to creative effort in the production of original poems.

The second and third books contain suggestions for "things to do," which provide training in executing directions accurately and also suggest related activities which the children may work out for themselves. The varied types of tests for checking the quality of reading done by members of the reading class will prove helpful to busy teachers.

The vocabulary of the readers has been carefully controlled. The teacher's manual furnishes very definite suggestions for the pre-primer lessons which prepare the child for the vocabulary of the primer. The suggestions offered are definite, yet in no way do they hamper the individuality of the teacher nor her opportunity to adapt the work to the interests and abilities of the children.

The variety and spontaneous character of the stories will undoubtedly hold the interest of the children throughout the entire series. Hence, the books may be included among the list of valuable supplementary readers for primary grades.

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Diagnosis and correction of difficulties in arithmetic.—The aim of a recent book dealing with arithmetic[1] is "to eliminate the difficulties which interfere with pupil progress" (p. iii). The author's purpose is to supply "the techniques

Bob (A First Reader), pp. 192. Dansville, New York: F. A. Owen Publishing Co., 1930.

b) Albert C. Lisson, in collaboration with Emma Grant Meader, The Happy Childhood Readers: *Alice and Billy* (A Second Reader), pp. 272; *The Happy Road* (A Third Reader), pp. 304. Dansville, New York: F. A. Owen Publishing Co., 1930.

[1] Leo J. Brueckner, *Diagnostic and Remedial Teaching in Arithmetic.* Philadelphia: John C. Winston Co., 1930. Pp. x+342.

for diagnosing pupil difficulties in all phases of arithmetic, and the types of remedial exercises which have been found by experiment to eliminate the difficulties that are located" (p. iii). The author sets up in the first chapter "The Basis of a Well Rounded Program in Arithmetic Instruction" and enumerates in detail the elements of method and procedure. The second chapter is devoted to "The Uses of Tests in Measurement and Diagnosis." The five chapters next following are devoted to techniques of diagnosis, and the two remaining chapters relate to remedial procedures.

The author has made the most extensive collection of diagnostic material that has yet appeared. This material rests on the basis of an analysis of content that is exceedingly keen. All the best experimental results are described and illustrated. Surely, no one can complain hereafter of a lack of diagnostic technique in arithmetic. On the other hand, the very wealth of the detail raises the question of application. There is a danger that the inexperienced teacher may become appalled at the number of things she may need to do in diagnosis and, consequently, do none of them. The section of the book given to remedial procedures is by no means so complete as that given to diagnosis. It applies for the most part to problem-solving and does not tell the whole story.

Each chapter in the book contains valuable lists of problems for study, reports, and discussion, together with a well-selected bibliography. All in all, Professor Brueckner has made an important and useful contribution to the literature on the teaching of arithmetic.

W. J. OSBURN

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Recent additions to the rapidly growing list of books in history for the intermediate grades.—Those interested in an enriched program in history for the intermediate grades have reasons to be encouraged for they no longer face the scarcity of suitable material that was common five or six years ago. During the years 1929 and 1930 not less than a dozen books in history especially intended for the intermediate grades have appeared. A number of these books were reviewed in a previous issue of this journal. It is the purpose of this sketch to call attention to four recent additions to the rapidly growing list.

Attention will first be given to a book which seems to complete a series that was begun some time ago. Reference is here made to Halleck's American History Series, composed of four books. The book under review[1] is the second in this series. It belongs to the hero-stories type. Such heroes as Samuel Adams, Franklin, Washington, Boone, Eli Whitney, Edison, Roosevelt, and Woodrow Wilson have separate chapters devoted to them. In several of the chapters two or more heroes or heroines, as the case may be, are grouped for treatment. Biography is used when it serves best to tell the story. When needed, simple historical narration is employed instead of biography. The authors have made an effective combination of these two methods of approach to the material they

[1] Reuben Post Halleck and Juliette Frantz, *Makers of Our Nation*. Chicago: American Book Co., 1930. Pp. vi+358.

present. The book is well supplied with teaching aids, such as pictures, maps, book lists, and things to do.

Since the appearance in 1909 of the report of the Committee of Eight of the American Historical Association, much consideration has been given in the intermediate grades to the European background of American history. Most of the material now available in this field is not adapted to Grades IV and V. There is, however, a demand from some quarters that children in these grades be supplied with material which will cause them to think of America as "the child of European civilization" before they are introduced to the makers of our nation. Two books[1] which aim to supply such material have recently appeared. They contain well-selected topics which extend from the Dark Ages in Europe to the end of the period of colonization in North America. Such topics as "How Europe Passed through the Dark Ages," "How England Became a Great Nation," "How Our Ancestors Lived in the Middle Ages," "How Europeans Rediscovered the Old World," "How Columbus Discovered the New World," "How the Spanish Explored the New World," "How the French Explored the New World," "How the English Explored the New World," and "How a New Age Began in England and America" are well treated in the first book. The second book opens with a section on "America, the Child of Europe" and continues with sections devoted to "Young Virginia and Her Neighbors," "Englishmen in New England," "New York, a Dutch and English Colony," "Pennsylvania, a Colony of Friendliness," "The Struggle for North America," and "Life in Colonial Days." It will be observed from the foregoing indication of their contents that the two books contain a rather systematic treatment of European and American history from the Dark Ages to the end of the period of colonization. To the writer's knowledge no such treatment for children in Grades IV and V has previously been available.

Both books are well equipped in such matters as pictorial and political maps, pictures, worth-while exercises, and useful reference material. In all these aspects they surpass many of the books that have previously appeared in their field.

The fourth book in the list under discussion[2] is strictly of the hero-stories type. Stories about four groups of heroes make up its contents. These groups are heroes of the Hebrews, heroes of European history, heroes of the exploration of America, and heroes of the colonization of America. From three to five stories appear in each of these groups—stories which children are expected to read and can read, stories containing a vocabulary which has been checked and rechecked, and finally stories that have been carefully tried out under actual classroom conditions.

[1] *a*) Charles F. Horne and Olive Bucks, *Europe, the Mother of America.* New York: Charles E. Merrill Co., 1930. Pp. xii+294.

b) Charles F. Horne and Olive Bucks, *Young America.* New York: Charles E. Merrill Co., 1930. Pp. viii+328.

[2] Earl A. Collins and Lyda Hale, *Hero Stories for Children.* New York: Macmillan Co., 1930. Pp. viii+264.

At the end of each story the authors provide teaching aids, such as study helps, things to do, and tests. Here and there throughout the book are scattered illustrations by a professional illustrator. There are no historical pictures in the book. The word list near the end of the volume is unique in many respects. The book as a whole shows evidence of much painstaking work on the part of its authors.

R. M. TRYON

American history for the middle elementary grades.—One of the interesting results of the growth in educational ideas is the new type of textbook which has appeared—the textbook which endeavors to fit itself to the child as he is rather than the book which demands that the child be fitted to it. In the social studies it has been recognized for many years that no great event can be adequately introduced and disposed of in one sentence, that no great movement or basic truth can be taught in a few phrases, that little love of the subject is to be expected in young children when sentences in their textbooks are complex and heavily loaded with words foreign to a child's vocabulary.

The granting of these truths and of others similar to them has been easier than the preparation of the new textbooks. Classroom teachers, eager to improve their teaching, have lacked a wide range of really adequate textbooks from which to select books fitted to their particular needs. Each new-type book is, therefore, a welcome addition to the school library. A new-type textbook in American history[1] intended for the middle elementary grades has appeared. The material which it contains is divided into five working units. Though each unit deals with a separate idea, the five combine smoothly into one sequence. The first unit pictures the intercourse between Western Europe and the East—the nature of the trade the continuance of which was sought, the routes tried, and the discovery of America. The second unit gives tales of exploration and adventures, the chief object of which was trade or exploitation. In the third unit the settling of the Atlantic seaboard is treated. The settlements are divided into two groups—those in which the bettering of economic conditions was uppermost and those in which the element of religious freedom was more prominent. The fourth unit follows the French explorers and trappers into the Mississippi Valley and ends with the struggle between France and England for the interior lands. The fifth unit deals with the separation of the Colonies from England and their establishment of an independent nation. The book ends with the adoption of the Constitution, but the story is to be carried on in a second volume.

The story form is frankly used throughout the book. Space is devoted to those descriptions of social and economic details which make a period real to pupils—to descriptions of what people ate, of how they did their work, of what they thought, and of why they acted as they did. Very few dates are used. Strict chronological sequence gives way to the grouping of related events. At the same time, the order of the events is clearly held before the child, and the rela-

[1] Mary G. Kelty, *The Beginnings of the American People and Nation.* Boston: Ginn & Co., 1930. Pp. viii+568. $1.20.

tions of the parts of the story, one to another, are strongly stressed. The stories are simple in form. The style is perhaps best judged from the level of a fifth- or sixth-grade reader rather than from that of an adult. The vocabulary has been carefully selected and tested. New concepts are presented adequately before unusual terms naming them are introduced. As a result, the material seems sufficiently simple to permit its use in silent-reading periods. In order that such use may be furthered, each section is headed by questions which tell the child what to seek in the next few pages. Each section is ended by a series of exercises—tests, games, and suggestions—which may be used to encourage the pupil to check his own mastery of the material he has just read.

Throughout the book the pictorial type of map is used. Each map is drawn carefully to give correct shapes of land masses, yet each is informal in type. Only the locations essential to the immediate story are lettered in, and tiny pictures suggest the events in their proper settings. Because many of the maps represent only a small area, they are planned for use with standard wall maps and should serve to make the wall maps clearer to the child as he uses them.

There are many illustrations, some drawn from early sources, some from paintings in which the accuracy of detail is rated high. Unfortunately, in a few instances the details seem to have been lost in the process of reduction to fit the page. Questions in the legends of the pictures serve to bind the illustrations to the text and to make them an integral part of the whole.

The Index and Pronouncing Vocabulary seems detailed enough to be really useful. It contains references to terms essential to an understanding of the stories as well as to names of persons and of places. A table of contents for each unit replaces that usually found at the beginning of a book. It would seem that such a use should give the child a preview of each unit as he begins it. An appendix for the teacher is added to the text, which shows in outline form the organization of the book and in which parallel references are given to the author's *Teaching American History in the Middle Grades of the Elementary School* (Boston: Ginn & Co., 1928).

To those who know the earlier work of the author, the textbook under review should prove particularly interesting. It is also to be recommended to those teachers whose courses of study call for American history in the fifth and sixth grades.

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Rating the importance of items of English grammar.—After giving a comprehensive review of earlier studies in the field and a compilation of an exhaustive list "intended to include all items of grammar" (p. 61), the author of a late study[1] presents the ratings of the various items of grammar by several groups of

[1] Harry N. Rivlin, *Functional Grammar.* Teachers College Contributions to Education, No. 435. New York: Teachers College, Columbia University, 1930. Pp. vi+94. $1.50.

judges. One hundred and sixteen elementary-school teachers, sixty-two high-school teachers, forty-nine graduate students in English, and four "experts" expressed their judgments as to the importance of each item by placing after it one of the following symbols, 0, 1, 2, or 3; the scale indicates ascending order of appraisal from "no value" to "most important." These data, with comparisons among the opinions of the various groups, are attractively presented. To the reviewer both the judgments and the comparisons seem of small value.

However, Table XVI, "The Functions of the Items of Grammar" (pp. 62–80), is very illuminating. For example, the objective case of the noun (Item 17, pp. 64–65) includes as subheadings ten "constructions": direct object, object of preposition, in apposition, indirect object, adjunct, adverbial objective, predicate accusative, retained object, subject of infinitive, and secondary object. The table indicates that *not one of these ten items functions* in the correct use of nouns in the English language. Non-functional, also, is the classification of a large share of other items included in Table XVI. The author defines "function" admirably as that "application of the knowledge of a grammatical item which will prevent the commission of an error in English or which will assist in the correction of an error already made" (p. 61). Unfortunately, he does not explain how the "functional" or "non-functional" values were ascertained. Moreover, this informative and challenging table apparently has no significant relation to the judgments of values elaborately presented in other parts of the book.

The outstanding fact is that, of 189 items of grammar listed, 69 are classed as non-functional. Unquestionably many of the remaining items "function" but very slightly, if at all. Think of the difficulty of teaching the gerund in English; its restricted and narrow "function" is that a noun used with a gerund must be in the possessive case. If this study does nothing more than keep alive the struggle against Latinizing English grammar to prepare pupils for foreign-language teachers, it will serve a worthy purpose.

R. L. LYMAN

The work of college placement offices.—Bureaus the purpose of which is to assist graduates to secure teaching positions are common in teachers' colleges, normal schools, and universities. The large number of new teachers that must be employed each year and the increasing confidence that school administrators have in the opinions which the officials of the placement bureaus give with regard to candidates for positions make the services of these bureaus of increasing importance to education. A recent investigation[1] discloses a number of interesting facts concerning (1) problems centering in the placement of teachers, (2) practices in the collection of information about candidates, (3) forms used by placement offices, (4) the administrative policies directing placement offices, and (5) the scope of the activities of placement offices. To gather this information,

[1] Whit Brogan, *The Work of Placement Offices in Teacher Training Institutions*. Teachers College Contributions to Education, No. 434. New York: Teachers College, Columbia University, 1930. Pp. vi+98.

the author sent a questionnaire to all white state teachers' colleges and normal schools in the United States, to thirty-one presidents of teachers' colleges, and to eighty-seven selected school superintendents in cities of ten thousand and more. Personal interviews with school superintendents and with presidents of teacher-training institutions made more complete the information received by means of the questionnaire. The forms and records of the placement offices which sent in questionnaires were studied, and the conclusions are included in the investigation.

Much of the material which the author presents is of special interest to those immediately engaged in placement work. In addition, the author includes a comparison of the forms used by city-school systems in securing information about applicants seeking teaching positions and the forms used by college placement bureaus in collecting information about the personal traits and abilities of registrants. The fact that the author has included in the study matters which school administrators consider and those which they should consider when employing teachers causes this investigation to have interest for a wide group of educators as well as for the small group of those more immediately concerned with placement work.

Together, the summary and conclusions found at the end of every chapter present a vivid picture of the present situation in the work of college placement bureaus. These summary statements also offer sound advice for a forward-looking program in this field.

ROBERT C. WOELLNER

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